APRIL 4, 1942

Railway Age

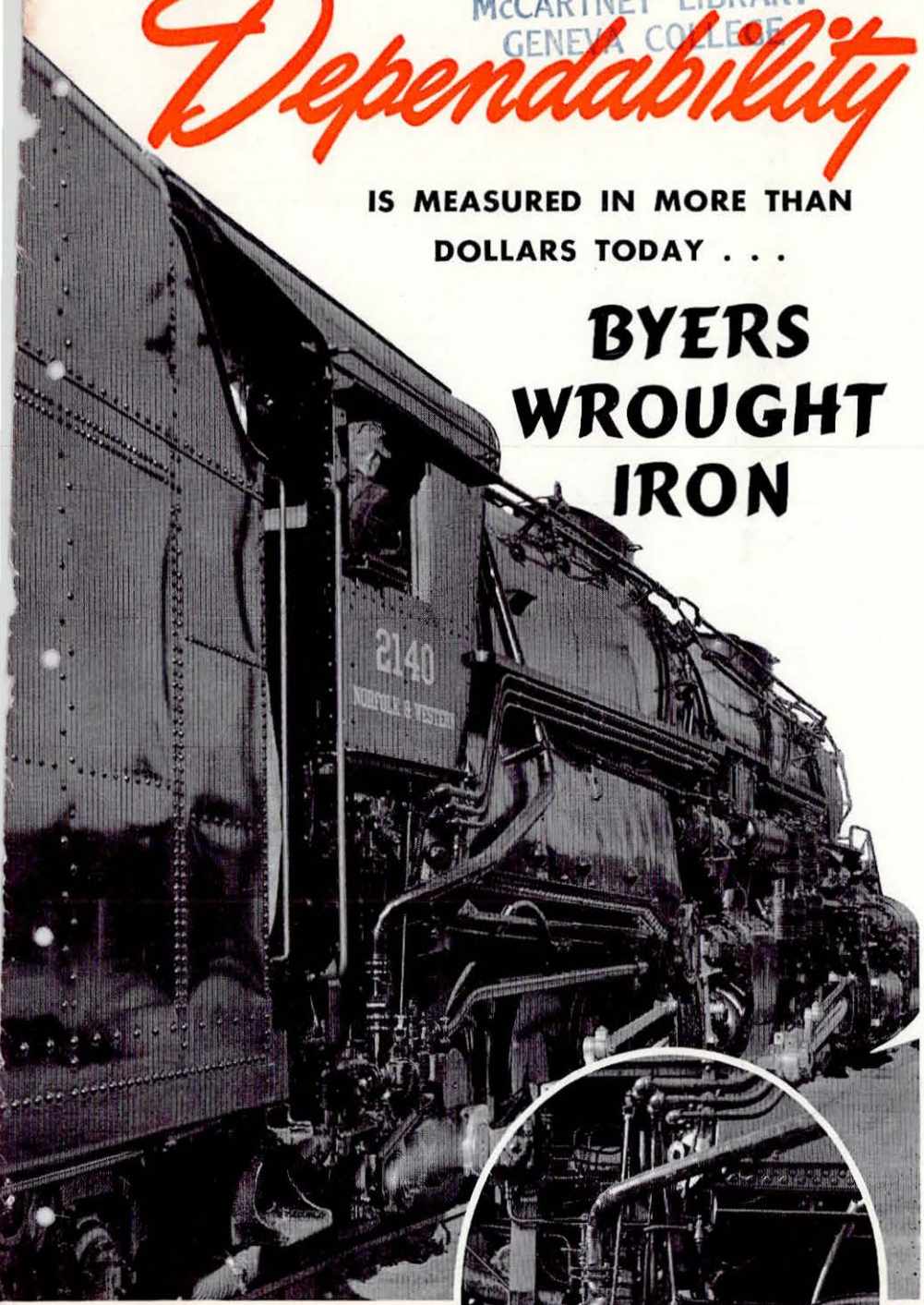
Founded in 1856

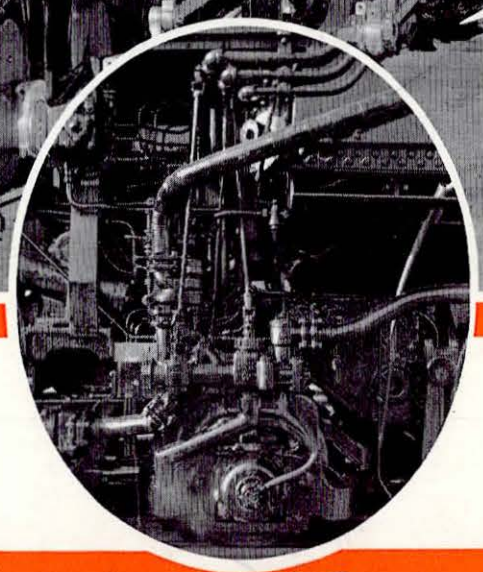
McCARTNEY LIBRARY
GENEVA COLLEGE

Dependability

IS MEASURED IN MORE THAN DOLLARS TODAY . . .

BYERS WROUGHT IRON





Last year the railroads hauled more tons more miles than any other carrier in the history of the world. This year the job is even greater . . . and so is the need for maximum dependability.

The Norfolk and Western is one of the roads that is helping the industry to make such a splendid showing . . . and one of the roads that depend on wrought iron to help "keep 'em rolling." Piping on sixteen new freight locomotives like the one pictured is Byers Wrought Iron, and Byers Wrought Iron billets were furnished for draw bars and safety bars on ten of them. Byers Wrought Iron pipe is also used on five of N. & W. passenger locomotives recently built.

The longer life of wrought iron, in services where corrosion or vibration causes premature failure of ordinary materials, is a matter of personal knowledge to almost all railroad men. Many are profitably extending its use to new applications, where the present emergency makes the cost and the consequences of failure too high to gamble with. If you have any new construction or repair work where such conditions exist, and would like to know the record of wrought iron in similar situations, our Engineering Service Department will be glad to give you actual performance data. Ask also for a copy of our new General Catalog, which gives complete information for ordering any Byers product.

A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco.

Corrosion costs you more than Wrought Iron

BYERS
GENUINE WROUGHT IRON
Tubular and Hot Rolled Products
Steel Tubular Products

UNIT TRUCK *Savings*
Are Just Like
HANDING YOU MONEY

GREATLY reduced expenditures for freight car upkeep are assured when Unit Trucks are provided. Unit Truck Brake Beams and their suspension eliminate hundreds of parts and many tons of steel. They will outlast at least four sets of conventional brake beams. Apply Unit Trucks and secure freedom from truck brake rigging failures.

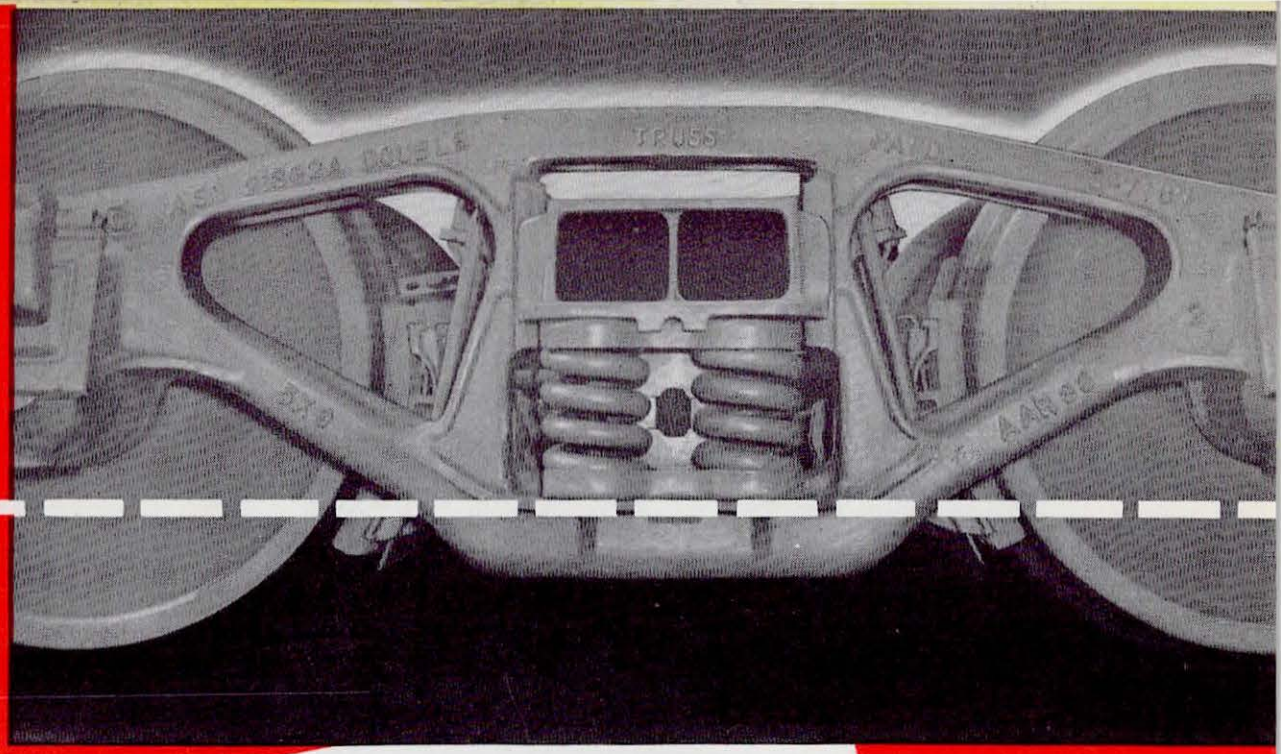
Approved for interchange.

Full information as to licensees authorized to manufacture Unit Trucks will be furnished upon request.

UNIT TRUCK CORPORATION

140 CEDAR STREET NEW YORK, N. Y.

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 112, No. 14.

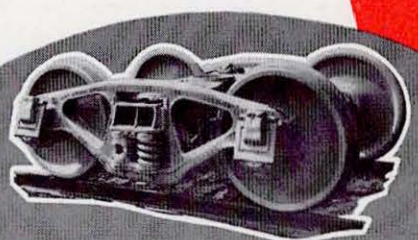


All spring assemblies on the same level

ALL springs (and snubbers) of the Self-Aligning Truck are on the same level. Easiest to inspect . . . easiest to shim. Removable as a unit . . . yet securely retained.

The design of the truck permits the use of standard A.A.R. springs . . . carried at every repair point.

The simplified construction utilizes designs of proved dependability . . . and economy.



SELF-ALIGNING TRUCKS

. . . now in service under more than 100,000 freight cars

AMERICAN STEEL FOUNDRIES

EDGEW

Contribute Im

The above photograph shows a new box car which is equipped with Edgewater Ring Spring Draft Gears — the Gear with high capacity and low weight.

IMPORTANT FACTORS
CONTRIBUTED BY
EDGEWATER DRAFT GEARS

1—CAPACITY
High capacity provides efficient cushioning to protect cars.

2—ENDURANCE
Long gear life provides continued protection.

3—SMOOTH ACTION
Closes smoothly at high speeds or low.

4—UNIFORMITY
All gears have uniformly high quality.

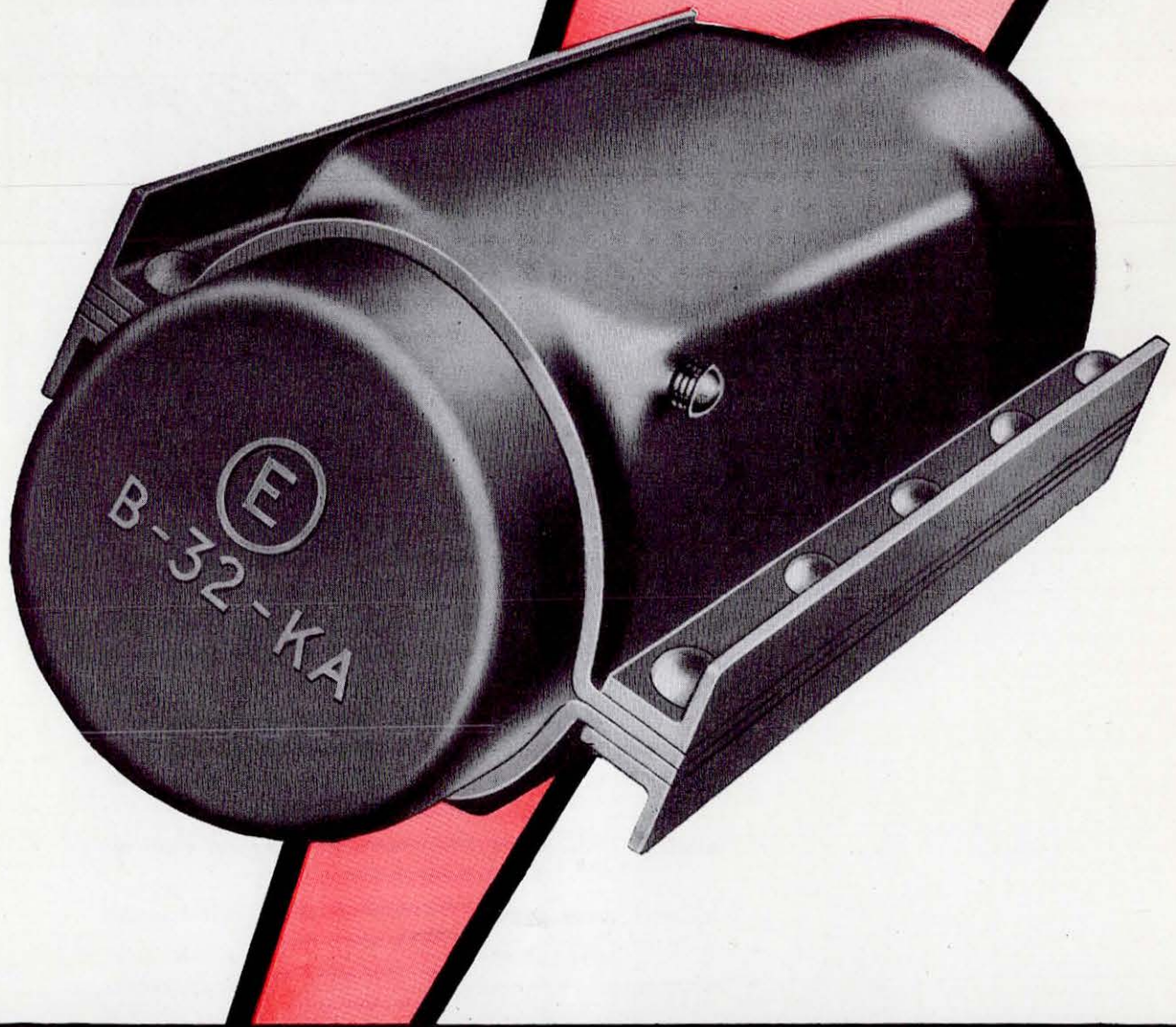
5—RELEASE
Release is quick and positive after impact. Destructive surges are prevented.

6—SIMPLICITY
It is furnished as a single selfcontained unit.

EDGEWATER STEEL COMPANY • PITTSBURGH, PA.

ATER DRAFT GEARS

portant Factors to Freight Car Progress



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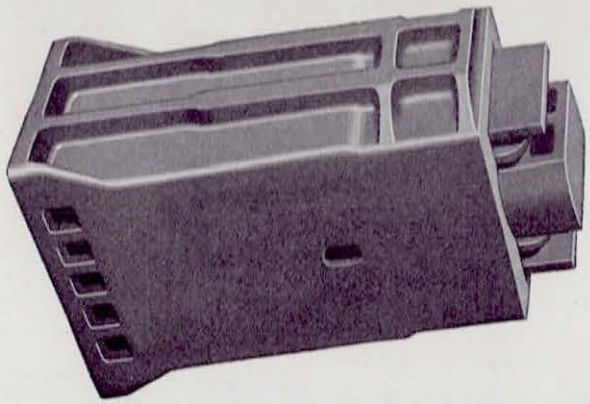
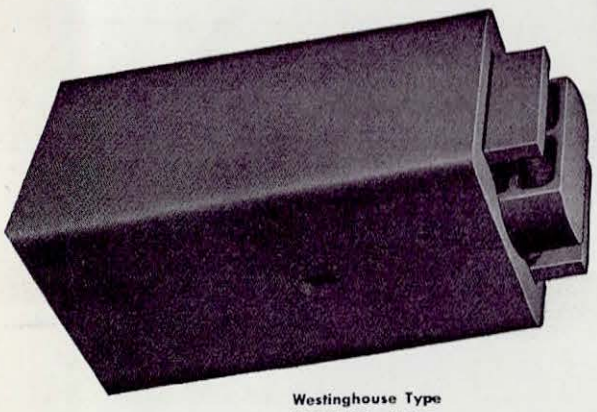
Philadelphia, Pa. Portland, Ore. St. Louis, Mo. St. Paul, Minn. San Francisco, Cal. Seattle, Wash. Tulsa, Okla. Washington, D.C.



Westinghouse Type
NY-11-E Draft Gear
(Certified A.A.R.)

MODERNIZE
your car protection

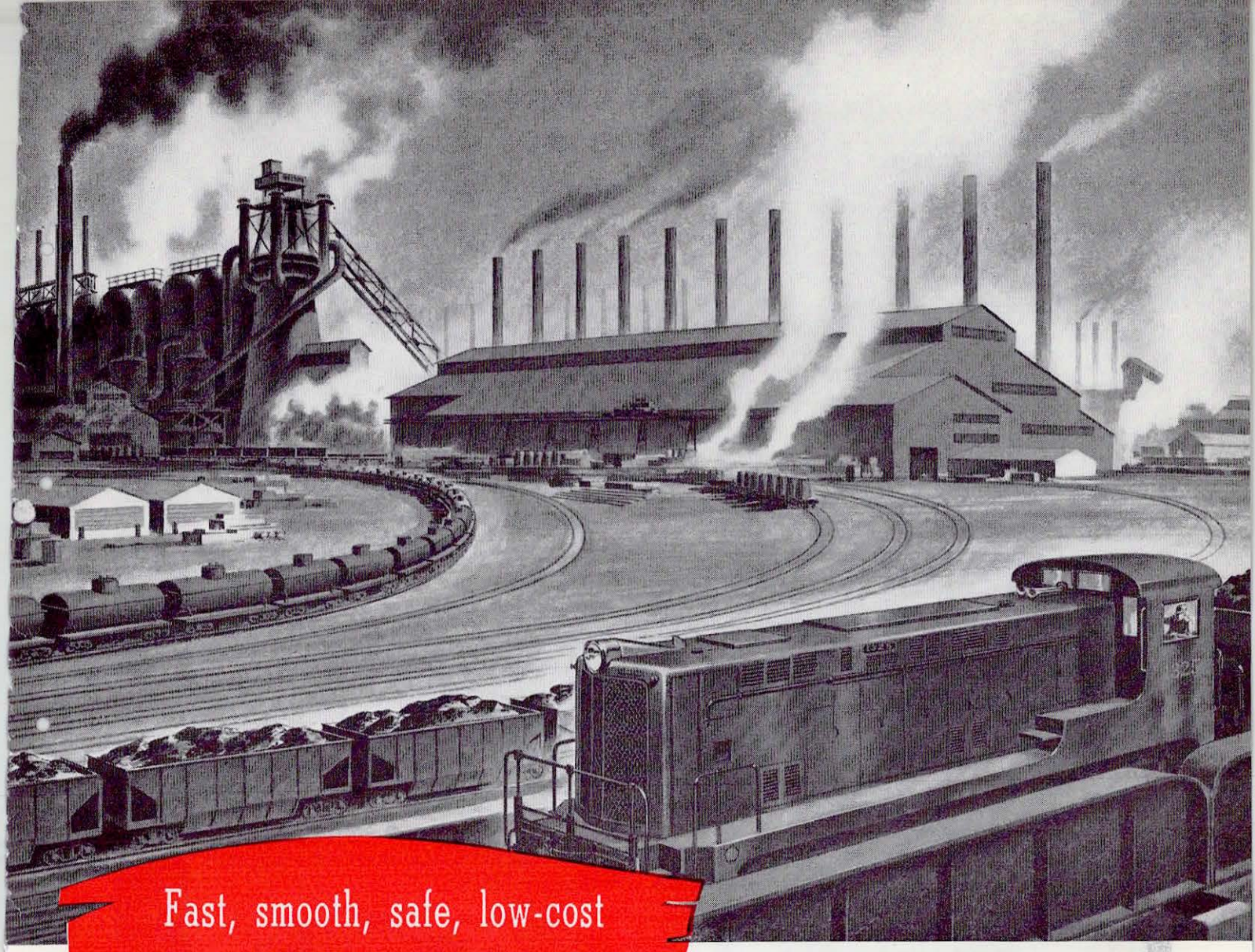


Westinghouse Type
NZ-11-E Draft Gear
(Certified A.A.R.)

Only cars protected by modern draft gears can withstand the buffing shocks of modern high-speed train movements.

Westinghouse certified draft gears provide this modern protection. They are so designed that no friction wear occurs on the housing. All friction wear is on the wear plates, which are inexpensive.

CARDWELL WESTINGHOUSE CO., CHICAGO
CANADIAN CARDWELL CO., LTD., MONTREAL



Fast, smooth, safe, low-cost switching is yours with a **Baldwin Diesel-Electric**

Faster switching of cars in and around freight yards means much in the speedier movement of materials. Yet the railroads have to watch costs. One of the best ways to accelerate the movement of cars in the yards, and at the same time do the job at a lower cost, is to put Baldwin Diesel-electrics to work.

These rugged locomotives have many advantages over older steam power. A Baldwin Diesel-electric starts faster, yet moves away under smooth, even power. It handles cars with ease—minimizes damage. It will operate with maximum availability. It consumes less fuel.

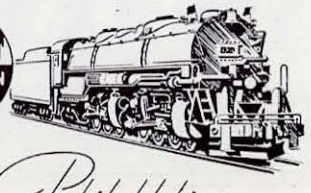
A Baldwin Diesel-electric has back of it the experience of 111 years devoted to meeting railroad motive-power problems.

More than 50 years of oil-engine experience is built into the Baldwin De La Vergne diesel engines which power these locomotives. Westinghouse Electric & Manufacturing Company, who supply the transmission equipment, have long been associated with Baldwin in building electric and diesel-electric locomotives.

In a Baldwin Diesel-electric, whether 1,000-hp or 660-hp, you have the right combination of engineering skill and manufacturing experience to give you a locomotive that will lower your switching costs.

THE BALDWIN LOCOMOTIVE WORKS

BLW THE BALDWIN GROUP



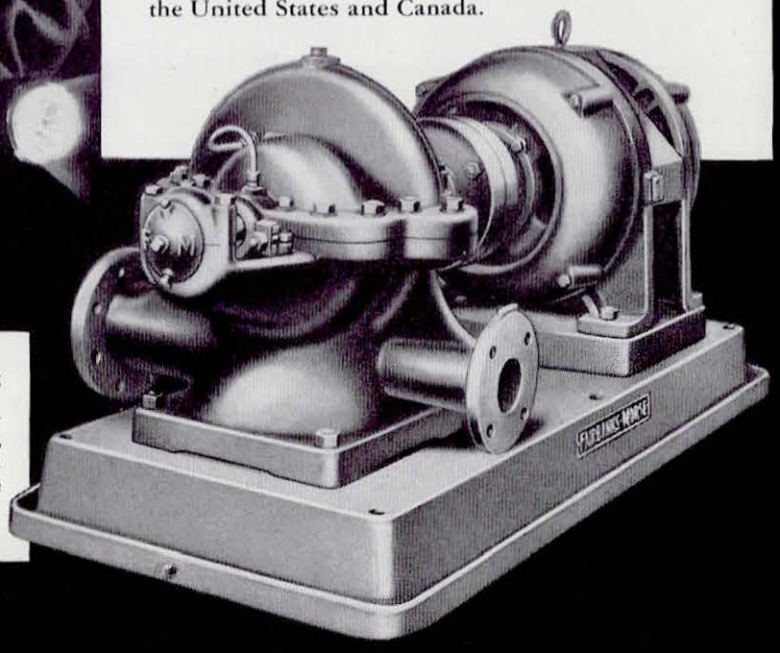
Philadelphia

Guards Are Futile Against THIS Sabotage!

RIGHT under your guards' noses, unsuspected saboteurs may be steadily draining off vitally needed power . . . and costing you a wasted dollar out of every four or five you spend for electricity.

These unsuspected saboteurs *are* working against you if your pumps are not of the latest, improved designs. For ten-year-old pumps of certain types, even if as good as new, require 25% more power than today's Fairbanks-Morse models. And 4- or 5-year-old pumps of other types consume so much more power than current models that their continued use is more costly than replacement.

Find out *now* if *your* pumps are the types which steal power and sabotage profits. Let a Fairbanks-Morse Pump Engineer make an inspection, with no cost or obligation to you. Write Fairbanks, Morse & Co., Dept. D69, 600 S. Michigan Ave., Chicago. Branches and service stations throughout the United States and Canada.



FAIRBANKS-MORSE CENTRIFUGAL PUMPS

A complete "family" of single-stage, split-case pumps for low, moderate, medium, and high heads, is described in Bulletin 5810D. Many other bulletins available on other types.

FAIRBANKS·MORSE PUMPS

DIESEL ENGINES ELECTRICAL MACHINERY MAGNETOS RAILROAD EQUIPMENT WASHERS-IRONERS STOKERS
PUMPS MOTORS FAIRBANKS SCALES WATER SYSTEMS FARM EQUIPMENT AIR CONDITIONERS

FORGET YOUR OLD ASSUMPTIONS

IMAGINEERING

IMAGINEERING

IMAGINEERING

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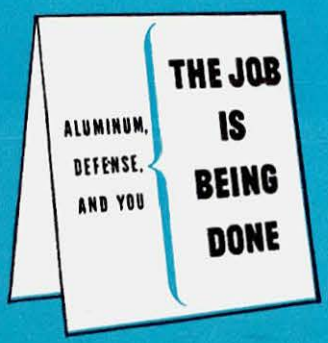


★

IN THESE DAYS an advertisement is no place either for hosannas or sermons about production. Every man knows how well he is doing the job that is before him. Deeds, not words, are the measure.

BUT WORDS CAN BECKON beyond the realms of immediate duty.

IMAGINEERING is such a word. We coined it to make the needs of the future a reality, here and now. It is a way of describing what a man can do about the day when. . .

HOW DO YOU DO IT? You let your imagination soar and then engineer it down to earth. You think about the things you used to make, and decide that if you don't find out some way to make them immeasurably better you may never be asked by your customers to make them again.

YOU FORGET YOUR OLD ASSUMPTIONS. For instance, you may be one who used to assume that aluminum was too expensive. Even if you were right then (and you may not have been) the price trend of aluminum knocks those assumptions into a cocked hat.

WERE YOU ONE who used to assume that structures behaved exactly the way the theory said? Have you looked into the new answers the mammoth testing machine in the Aluminum Research Laboratory has found for that one?

DID YOUR OLD PRODUCT GROW like Topsy? More than one designer is Imagineering with this point of view: My product was in a groove. I couldn't get it out, because I didn't dare get too far away from last year's model. Now's my chance to start from scratch, and let tradition be hanged.

THAT IS THE KIND OF THINKING that will make jobs in the future. It is the kind we can help with: help with ideas and with know-how. Will you invite us?

Aluminum Company of America, 2178 Gulf Building, Pittsburgh, Pennsylvania.

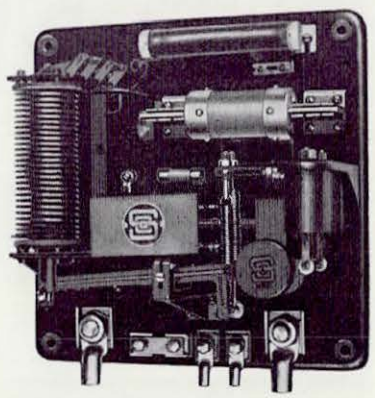
ALCOA ALUMINUM

D. L. & W.
BUFFET CAR

CORRECT REGULATION INSURES PROPER LIGHT

The importance of accurate voltage regulation in train lighting is evidenced by the fact that a voltage supply of 5% under normal results in 16% less light and a 5% above normal supply reduces lamp life considerably. Both should be avoided. One gives poor lighting, the other improper lighting and increased lamp costs.

Safety Carbon Pile Regulators give constant lamp voltage and proper light efficiency.



THE SAFETY CAR HEATING AND LIGHTING COMPANY, INC.

New York St. Louis Chicago San Francisco Philadelphia Montreal Boston

AMERICA'S OWN KIND OF WAR

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

OUR country didn't ask for this war. It was thrust upon us by a treacherous enemy. But of all the wars in world history, this one comes nearest to being made to our measure.

The whole life and training of generations of Amerieans fit us to excel in mechanized warfare. From pioneer days we have been an ingenious people. Starting in a vast, undeveloped country, we have had the inventive skill and the resolution to shorten distances and lighten toil with machines.

We have built more railroads, more motor cars, trucks and tractors than any other nation on earth. We have built machines to turn the resources of mines, forests, oil fields and farms into productive wealth. And among the millions of Americans now of military age, there is scarcely a man who has not grown up familiar with the handling of machinery.

We have the horsepower and the man-power. We know how to use machines and we know how to produce them. There is only one thing that can lose this war for us, and that is complacency —half-hearted effort—failure to face the shocking possibility of defeat.

To win we have got to put *all* our energy and *all* our will into the one big job before us.

There is no complacency among "Caterpillar" men and management. Every worker in the plant knows why America needs the machines he builds, and he builds them with all he's got.

"Caterpillar" Diesel Tractors, Graders, Engines and Electric Sets are giving valiant service today on every fighting front. They are saving men, and the time and labor of men; breaking jungle trails, building and repairing landing fields, hauling big guns, powering winches, generating current for search-lights and telephones, clearing beach-heads, supplying main or stand-by power for Navy and Coast Guard craft.

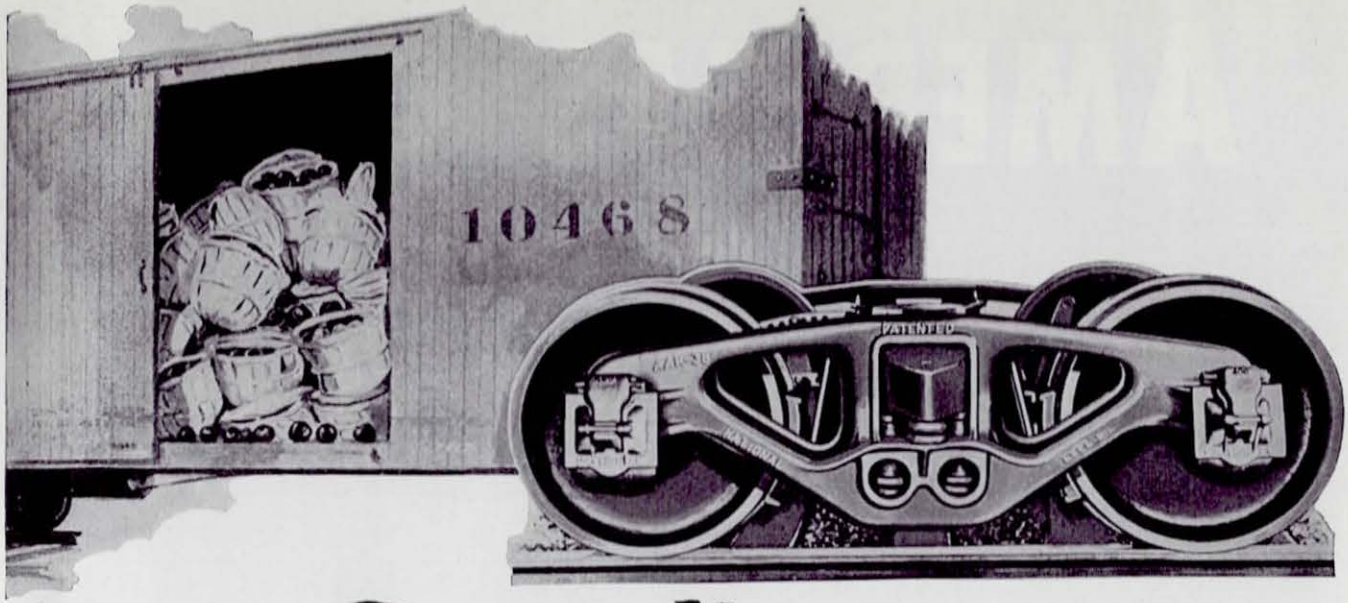
Without redesigning or lost motion, the whole productive effort of this company has now been given a single aim — to put Diesel power in the hands of our Armed Forces and our Allies. And "Caterpillar" dealers everywhere are devoting their service facilities to keeping the machines in fighting trim for the all-out war job.

In this battle for our rights and freedoms, there is no room for bystanders. All of us are fighters now. And it's *our kind of fighting!*

CATERPILLAR TRACTOR CO.

PEORIA, ILLINOIS

TO WIN THE WAR: WORK—FIGHT—BUY DEFENSE BONDS!



Badly Shaken Up

lading, caused by the continued oscillations of truck springs, may result in claims for "Damage in transit," which might have been prevented had the car been equipped with National B-1 Trucks with dual control.

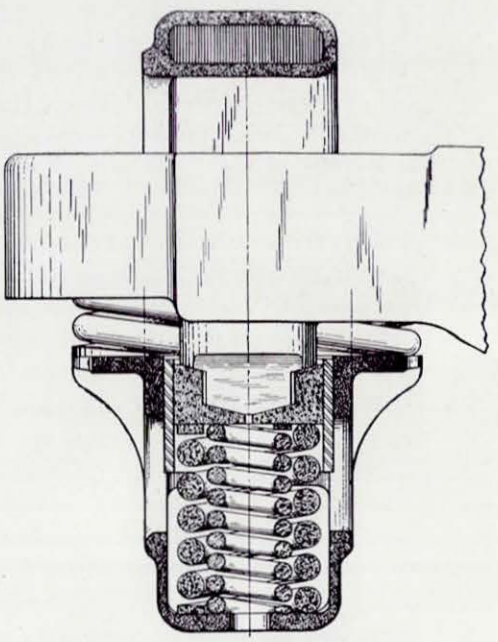
Control of vertical oscillations, or spring bounce, assures smooth riding and protects the lading.

Control of horizontal oscillations, which tend to throw trucks out of square, is necessary for safety at high speeds.

Other Advantages are

Quick Wheel Change
Springs cannot go solid
No spring plates are required
Brake Beam Safety Ledges
Brake Beam leveling links

Complies with all A. A. R. Specification Requirements



Section Thru Control Unit
2 Units in Each Side Frame

***Specify* NATIONAL B-1 TRUCKS WITH DUAL CONTROL**

NATIONAL MALLEABLE AND STEEL CASTINGS CO.
General Offices: CLEVELAND, OHIO
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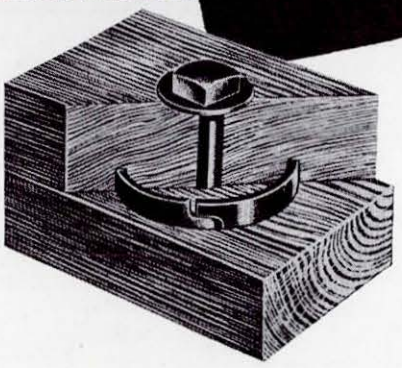
Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

Canadian Representatives: Railway and Power Engineering Corporation, Ltd., Toronto and Montreal



The TECO Ring Connector spreads the load on a timber joint over practically the entire cross-section of the wood.

We're building rings of 'planes, ships, tanks, guns 'round their necks . . .

We're building hundreds of new and larger factories to make 'em . . .

We're using wood and shooting the steel at Hitler . . .

Wood is plentiful, and the new engineering technique of the TECO Connector System of timber construction enables it to do structural tasks once thought possible only with metal.

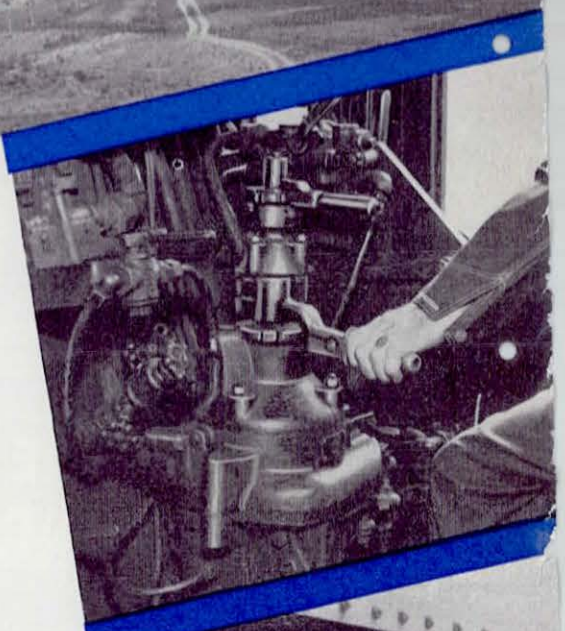
For information on how timber and the TECO System are being used to produce all sizes and types of war structures, faster . . . with a minimum of "critical" materials . . . write for these FREE booklets.

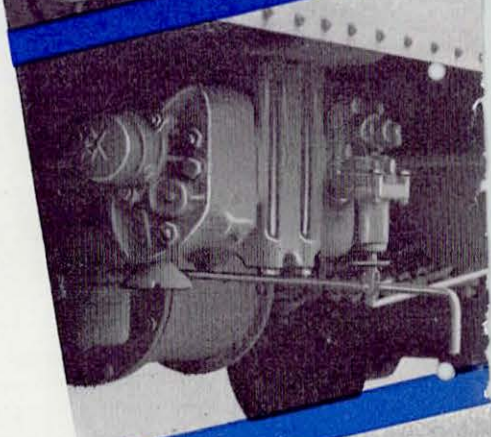
Timber
ENGINEERING COMPANY
1337 CONNECTICUT AVENUE
WASHINGTON, D. C.

TIMBER ENGINEERING COMPANY, Inc., Dept. N-4
1337 Connecticut Avenue, Washington, D. C.
Gentlemen: Please send me your FREE booklets.

Individual .....
Firm .....
Street .....
City ..... State .....

"Smooth Train Handling . . .
Facilitated by These Improvements"





SO said an R. F. E. who had realized by operating experience how the 8-ET Equipment, AB Brakes, and the new Release Control Retainer, combine to insure better control of freight train movements. ★ The 8-ET harmonizes with car brakes on time and pressure basis — will not "creep on" — has automatic limitation of the rate and degree of initial service reduction, and "controlled" development of emergency cylinder pressure ★ The AB provides very fast serial transmission — each brake responds instantly, and effective pressure is obtained quickly — release action is likewise responsive, certain, and uniform — emergency propagation is speedy, and cylinder pressure develops at a "controlled" rate ★ The Release Control Retainer, having slow direct exhaust feature, provides for better slack control on long trains — permits release at lower speeds, thus eliminating many stops — requires less frequent change of setting on undulating grades. » » » » » » » » »

Do YOU have at your command such effective means to facilitate handling of vital freight today?

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

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Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 112 April 4, 1942 No. 14

In This Issue

This C. N. R. Bridge Designed to Economize in Steel . . . . Page 691

A description of a new Canadian National structure spanning a highway subway in which savings were effected by constructing the deck largely of reinforced concrete.

Storekeepers Build Up Inventories to War Strength 695

An article analyzing materials and working stock inventories of United States railroads as of January 1.

Railroad Motive Power of the Future 702

An abstract of a paper by Frank B. Powers, of the Westinghouse Electric & Manufacturing Company, in which he estimates what can be expected of electric, steam and Diesel-electric locomotives.

EDITORIALS

Is Criticism "Disloyal"? 687
How Maximize Passenger Capacity? 688
Increased Track Capacity Quickly 689

GENERAL ARTICLES

Winning the War While Planning for Peace 689
This C. N. R. Bridge Designed to Economize in Steel 691
James E. Gorman Passes On 693
Storekeepers Build Up Inventories to War Strength 695
Railroad Motive Power of the Future, by Frank B. Powers 702
Electric Locomotive for Piedmont & Northern 705
Good Railroading Needed for Perfect Shipping 705
British Roads Set Up Post-War Plan Group 706

NEWS **707**

REVENUES AND EXPENSES OF RAILWAYS **736**

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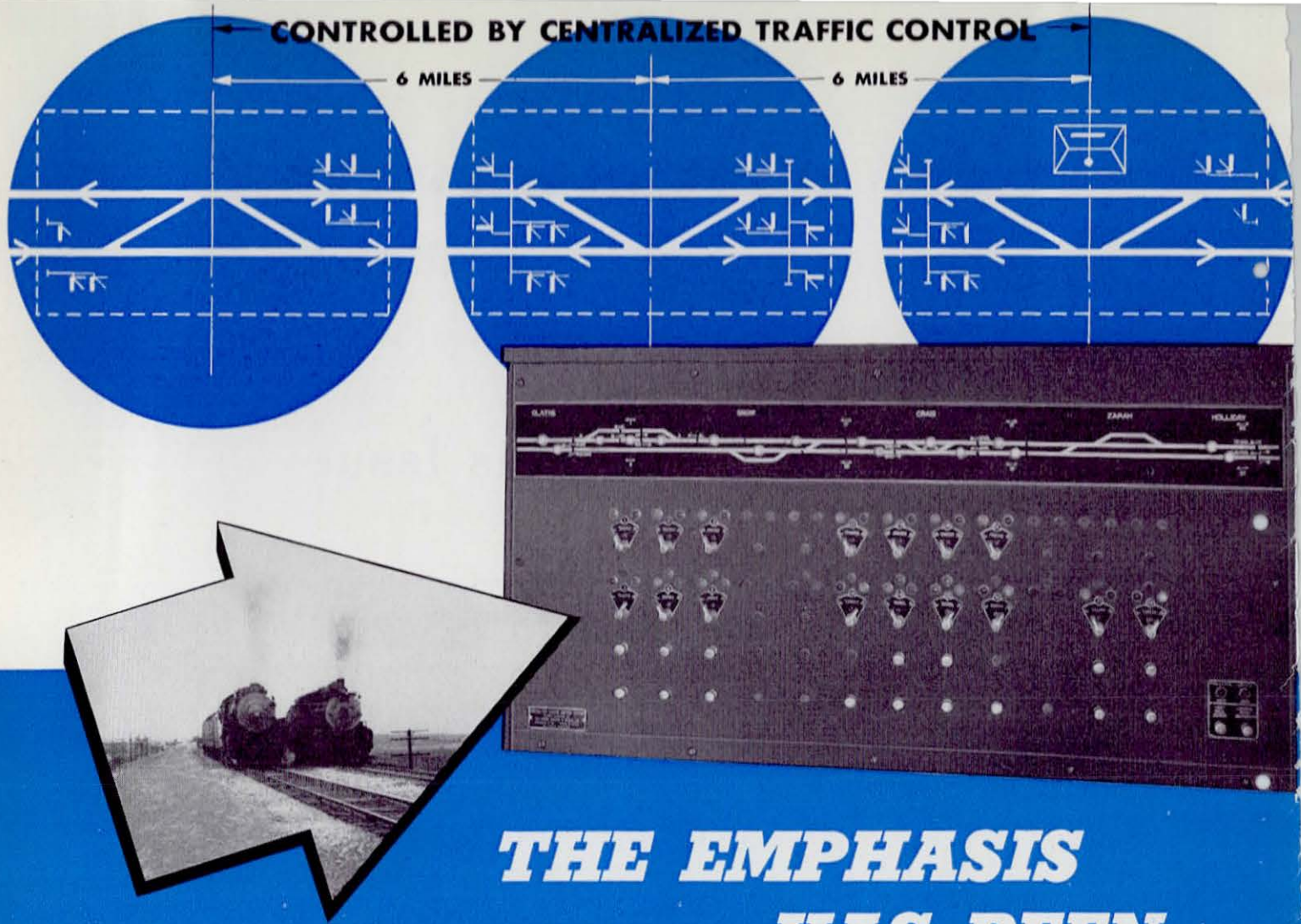

THE EMPHASIS HAS BEEN . . .

on the advantages of Centralized Traffic Control on a single track railroad. These advantages can also be obtained with C.T.C. installations on multiple track roads where capacity is inadequate to meet the growing demand for speedier and greater movement of men and materials. C.T.C. which enables train operation by signal indication in either direction on one or more tracks in multiple track territory will greatly increase capacity to move trains with a minimum of delay.

A concrete example is a 12-mile section on one railroad where the construction of a third track to reduce train delays frequently encountered had been under consideration. Instead, a C.T.C. System was installed so that all trains could be directed by signal indication throughout the territory. Power operated crossovers were installed at each end and in the center of this section and along with the necessary signals were controlled from one C.T.C. machine so that trains could be speedily diverted from one main track to the other. As a result train performance has been speeded to produce an average saving of 9 minutes per train in this comparatively short territory.

C.T.C. with reverse direction signaling provides a facility for double track operation equivalent to that afforded by three or four tracks signaled for train operation in one direction only. Centralized Traffic Control represents a method of reducing transportation time and increasing capacity for additional traffic with minimum use of critical materials. » » » » »

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

The Week at a Glance

CRITICISM IS PATRIOTIC: There is plenty of opposition—based on well-founded misgivings—to the ODT general order putting a minimum weight on l.c.l cars. But the controversy lies between opponents who are all striving for the same goal—maximum efficiency in transportation. Neither side suspects the other is in Hitler's pay, or makes such accusation. The leading editorial herein suggests that government officials who suspect treason in every critic might look with profit on the transportation set-up. The discussion goes on to call attention to Donald Nelson's advocacy of the St. Lawrence Waterway—a project which is supported by no competent and disinterested counsel. Do Americans owe loyalty to Mr. Nelson when he insists on measures outside the range of his experience and contrary to the unanimous counsel of informed advisors? Such misguided loyalty, harkening to political rather than experienced advice, would encourage widespread inefficiency and might lose us the war.

●

INVENTORIES UP: The railroads, including those other than Class I, had 466 million dollars of supplies on hand on January 1, which was 35 per cent more than a year previous. Details are analyzed and tabulated elsewhere in these pages.

●

LOCOMOTIVE FORECAST: The development that is likely to come in steam, electric, Diesel and, possibly, turbine locomotives is weighed and analyzed in a paper herein, by Frank B. Powers of Westinghouse Electric.

●

RY. SUPPLIERS HONORED: Three companies which are engaged regularly in the manufacture of railway materials and equipment, but which have also been doing important war work, have been awarded the coveted Navy "E," as is briefly related in the news pages herein. This honor, naval officers have explained to us, is not lightly bestowed, and companies which win it—management and employees alike—have every reason for legitimate pride.

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HEAVY LOCOMOTIVE BUYING: No other March since that of 1929 witnessed the ordering of so many steam locomotives — 102 — as the month just past. This and other trends and developments in the equipment market are analyzed in the monthly equipment review which appears in the news pages herein. There are many inquiries outstanding, and the car-building program continues to lag behind schedule.

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PRESCRIPTION FOR CHAOS: Two affronts to his well-ordered wisdom activated Walter Lippmann's polite pen in his syndicated article on April 2. One was the failure of an immediate supply of all the shipping we could handily use to fight wars thousands of miles away. The other was the low opinion in which the Maritime Commission apparently holds the "sea otter" ship. As usual, Mr. Lippmann had a quick and easy answer, namely, that a dictator should be appointed over all transportation—internal as well as external. Internal transportation, Mr. Lippmann solemnly misinformed his readers, is under the control of *"any number of separate authorities."* Centralized control over details, of the kind Mr. Lippmann has in mind, did not work well in the last war, even in the limited area of domestic railroading. Mr. Lippmann appears not to wish to soil the abstract purity of his logic by checking its conformance with vulgar facts.

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ARMY TRAFFIC DEPT.: The Army has enlarged its transportation department and has enlisted the services of some distinguished executives from the industry—among them G. Metzman of the New York Central, Fred Horner of General Motors, W. J. Williamson of Sears, Roebuck and John Franklin of the United States Lines. Further details will be found in the news pages.

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UP GOES OIL TONNAGE: The petroleum products hauled by the railroads in the March 21 week mounted further to 465 thousand barrels daily. The Petroleum Co-ordinator has issued further instructions to shippers and receivers, still further to promote efficient use of available cars and the A. A. R. has established a Tank Car Section in the Car Service Division the better to achieve this objective.

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POLITICAL WHEAT PROBLEM: Henry Wallace's "ever-normal granary" has worked out so that practically all the elevators are full, with a handsome crop in prospect. At a special grain meeting at Kansas City, reported in the news pages herein, the Commodity Credit Corporation (alias Department of Agriculture) regional director was on hand to orate about the virtues of the "ever-normal granary"—but not to disclose what would be done with the wheat surplus this brilliant political brain-child has produced.

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RY. LABOR ACT ON TRIAL: The constitutionality of the Railway Labor Act (especially that part which denies, or makes impracticable, court review of Adjustment Board decisions) is going to be weighed by the United States Supreme Court. The case which the court has agreed to hear is that of *Washington Terminal vs. Boswell*, in which an appeals court denied the terminal company a judicial review of an Adjustment Board decision.

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LOADINGS TO RISE 14.6%: In the second quarter, carloadings are going to be 14.6 per cent above those of 1941—according to the estimates of the Shippers' Advisory Boards. The Allegheny and Ohio Valley boards look for increases of 24 and 34 per cent, respectively. Less-than-average increases are expected in the New England, Atlantic, Southeast, Mid-West, Mo.-Kan., and Pacific areas. About average rises are what the rest of the boards are counting on.

ON THE "PLANNING" FRONT: The politicians and social reformers continue to elaborate the pattern of the post-war America they intend to have. Jerry Voorhis, New Deal Congressman, has secured a favorable report from the House labor committee on his bill to establish a "national commission for post-war planning." This board would be more like a convention than a committee, since it would have 34 members—10 from Congress and 24 appointed by the President, just to make sure that it will be loaded down with New Dealers. Of the President's appointees, there are to be representatives of consumers' co-operatives, labor unions, churches, schools, "welfare" organizations and—badly outnumbered—industry and finance. America of the future, it seems, is to be dominated, as during the past nine years, by the spenders of wealth—not by its producers and conservators.

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MORE THAN BARE DUTY: In the news pages herein is recorded the story of an engine crew who, when a piece of brake pipe failed, arranged for the necessary repairs at a nearby factory and thus saved a bad delay to their train—and the tie-up of a busy piece of track. Resourceful service beyond the requirements of routine duty is what soldiers get medals for. Railroad men who did what this engine crew did are deserving of similar recognition. Such devotion to the job, in this *war of transportation*, contributes to military effectiveness in the same way as when it is displayed by soldiers. We'd like to have the chance to report a lot of cases like this one.

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GO CAHOOTS WITH BUSES?: John Rogers wants the bus operators to co-operate with each other and the railroads to the extent of staggered schedules, joint use of terminals and, even, pooling of service—but he warns that the law makes it necessary that the ODT be in on any moves which will lessen competition. He wants service pulled off where patronage is light, unless considerable public inconvenience would result. He recognizes that commutation traffic isn't desirable, compared to line haul, but "it is a necessary service and each class of carrier will be expected to do its part."

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1941 CAPITAL OUTLAY: Capital expenditures in 1941 were 543 million dollars —the largest total since 1930 when, it will be remembered, heavy commitments were made in co-operation with the government's effort thus to restore prosperity. The increase over 1940 was about 114 million dollars.

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TWO MONTHS' EARNINGS: In the first two months of the current year, total operating revenues were up 28 per cent over last year—*but* operating expenses showed an increase of 29 per cent. Net railway operating income for the two months was 135 millions, as compared to 120 millions last year.

AROUND *The Clock*

THE continuous increase in tonnage, incident to the war program, has created a locomotive situation which day by day is becoming extremely critical. To meet this emergency, every available locomotive, regardless of the service for which it was originally designed, has been pressed into service, with the result that the railroads' reserve motive power capacity has become totally absorbed.

General Motors Diesel Freight Locomotives make it possible for the railroads to release for other important services as many as five heavy steam locomotives for each Diesel installed. And Electro-Motive is working right around the clock to meet the increasing demands for additional GM Diesel power.

WHO SERVES THE RAILROADS—SERVES AMERICA

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS CORPORATION LA GRANGE, ILLINOIS, U.S.A.

RAILWAY AGE

Is Criticism "Disloyal"?

Many railroad men doubt that the ODT's minimum carload order for l. c. l. freight is the most effective means to secure highest efficiency in the use of merchandise car equipment. Even those railroad people who question the wisdom of this order, and who possibly may oppose its becoming fully effective, do not do so because they differ with the goal the ODT is seeking, but only because they are convinced that better means to achieve that goal are possible. Nobody questions anybody's loyalty or suggests that the other side is in Hitler's pay.

The attitude of railroad men toward the ODT on a question where there is legitimate basis for difference of opinion typifies a relationship which would be a healthy one for all citizens to hold toward the government in its war activities—i. e., a combination of cooperation plus constructive criticism.

Perilous Not to Resist Incompetence

Some misguided idealists, on the contrary, seem to think that it is traitorous to criticize government officials in a period of military crisis. Quite the contrary is true—provided the criticism is realistic and is concerned with the hard facts of how the war is being conducted. War is real. It consists in hurling destructive materials at the enemy, and warding off those he heaves at us. If a public official acts to promote the efficiency with which we assemble lethal substances, and the men to dispatch them, he merits public support. If he acts otherwise, the citizen ought to oppose him—in degree proportionate to his inefficiency. Failing opposition by the citizens to official incompetence, our soldiers and the things they need to fight with will not be provided with maximum efficiency. The lack of such efficiency might lose the war for us.

At a meeting in Washington a few days ago this writer heard a well-known industrial executive, who occupies an important position in the government's war supply organization, plead with obvious sincerity for greater "loyalty" to the War Production Board—especially to its chief, Donald Nelson—and to the President. When public officials act in any area of the war effort *in a manner to promote the efficiency* of that effort, then they plainly deserve the enthusiastic cooperation of every citizen; otherwise not.

To be specific—the New York Times this week reported that a state legislator at Albany, N. Y., had a letter from Chairman Donald Nelson of the WPB, in which Mr. Nelson advocated the construction of the St. Lawrence Seaway as a war measure. As authority for his position, he gave the names of two of his subordinates in WPB—one of whom came from TVA and who, hence, is a prejudiced witness for government power, and the other who is a distinguished manufacturer with no experience in either transportation or electricity. There is no person in America, qualified to advise authoritatively on either transportation or power—and disinterested—who does not condemn the St. Lawrence project, not only as economically wasteful at any time, but as especially harmful at the present time because of its wastage of scarce materials.

Where does the citizen owe his loyalty? To Mr. Nelson, when he presumes to give advice on a subject about which he does not even claim to have first-hand information, or to competent and disinterested opinion which advises to the contrary? If the American people want to be realistic with their loyalty they will give it to Mr. Nelson when he counsels them in the field where he is qualified to speak, and withhold it from him when he seeks to admonish them outside the range of his competence. The trouble is—where a man gets a reputation for testifying about things he does not know about, he runs the risk of inviting challenge even when he really is giving competent advice.

Where Loyalty Requires Opposition

The conduct of the war consists of a vast series of tasks and decisions—every one of them, if our effort is to be effective, calling for the utmost competence which we can bring to bear on it. Effective loyalty on the part of the citizen consists in himself doing the job that he is equipped to do with all the skill and energy he can command; and giving his support to public officials who are doing the same. It is a mistaken, and even fatal, loyalty which leads either a citizen or a public official to support policies or persons, when such support leads to less than the maximum expertness and disinterestedness on every job or decision connected with the war.

General MacArthur has the loyalty of the American people because he has done with devotion the job at which he is extremely competent. He did not win the respect in which he is held by offering opinions freely on controversial political questions, beyond his range of intimate experience. It is a wonder that public officials who are dissatisfied with the degree of loyalty which they are able to command do not study the behavior of those who do command it, and strive to profit thereby.

How Maximize Passenger Capacity?

Recent statistics of railroad passenger traffic reveal that the public is rapidly turning again to the railroads for a service which, in recent years, has been relatively poorly patronized. They indicate, also, that a considerably more intensive utilization of existing facilities than that to which they have yet been put is possible—before it should be necessary to turn customers away, except in isolated instances. The figures suggest, moreover, that intelligent co-operation of the railroads and the public will go far toward minimizing the inconvenience of growing congestion.

The rapidity of the increase in travel by rail may, perhaps, best be realized by expressing the volume of traffic (revenue passenger-miles) of recent months in terms of percentages of the same months in 1929. For example, passengers carried one mile in January, 1941, were 87.7 per cent of the passengers carried one mile in January, 1929. Other percentages of 1941 monthly traffic to 1929 months follow:

Feb.	87.0	June	88.6	Oct.	101.4
Mar.	90.6	July	91.4	Nov.	104.6
Apr.	92.9	Aug.	92.4	Dec.	119.1
May	87.3	Sept.	91.6		

The total of passengers carried one mile is not available at this writing for any of the 1942 months. In January, 1942, however, passenger revenues were 38.7 per cent higher than in January, 1941,—and the recent fare increases had not come into effect in that month. It seems likely, therefore, that passengers carried one mile in January, 1942, were probably not far from 38 per cent above January, 1941,—which would put the January, 1942, passengers one-mile figure at 121 per cent of 1929. Thus, in the four months from September, 1941, to January, 1942, passenger traffic jumped from less than 92 per cent of the 1929 level to 21 per cent above that level.

The average number of passengers per car was greater in December, 1941, than in any previous December since 1920. Still, that average (17.9 passengers per car) represented less than one-fourth the capacity of the average passenger-carrying car (72 passengers)—which is a load factor that other forms of transportation would consider ruinous. (For example, air transportation in 1940 had a load factor of 58 per cent.) If the railroads should follow the practices of other agencies—relinquishing lightly-patronized services to alternative methods and accustoming their patrons to accommodate their travel more largely to the carriers' convenience—quite likely a much higher load factor could likewise be attained in railroad passenger service. As the figures show, the railroads could carry double the passengers they are now carrying, with their present equipment, if they should adopt policies, as their rivals do, which bring a ratio of 50 per cent or more of pay-load to capacity.

Some one has truly said that the best kind of "planning," which can be carried on to meet the difficult days which can be foreseen when the war ends, is to operate with the utmost efficiency while the war is on. There never was any economic justification, alternative forms of transportation being available, in running, merely as a public service, passenger trains to which the public gave meager patronage. Now the very necessity of national survival *demands* that such uneconomic services be curtailed—so that the equipment may be used in services where the volume of patronage indicates that it will satisfy the requirements of a maximum number of people. Elimination or pooling or other devices necessary to economize facilities during the war should enable the carriers to enter the post-war period unencumbered by many of the unremunerative services which hampered their performance during the trying 'Thirties.

The more information the public has of the facts which face them with respect to passenger transportation, the more they will be able to avoid inconvenience in the "tightness" which is developing. For example, President Ralph Budd of the Burlington in a public statement a couple of weeks ago made it known that in July and August, week-end travel in and out of Chicago is 75 to 85 per cent heavier than it is on Mondays to Thursdays, inclusive. Many persons who would otherwise travel on week-ends might, with but little inconvenience, shift their journeys to other days—and thus find plenty of space available for them. By having such information and acting upon it, they will help themselves no less than the railroads—and thereby also contribute to the effectiveness of the carriers' war effort.

An accompanying table gives some significant statistics, which indicate the growing need for the utmost economy (i. e., maximum use of facilities), in railroad passenger service. It will be noted that the number of cars available for carrying passengers has declined about one-third since 1929—while the railroads, in recent months, find themselves faced with the necessity of carrying much more traffic than they had in 1929, when they had more cars. The reasonableness of an

Passenger Traffic — Volume, Revenue, Price, and Equipment, 1929-1941

Year	Passengers Carried (Millions)	Passengers Carried One Mi. (Millions)	Passenger Revenue (Millions $)	Avg. Rev. per Passenger-Mi. (Cents)	Rev. Passengers per Car	Passenger-Carrying Cars in Service* (000)
1929	779	31,079	874	2.81	12.5	40.5
1930	704	26,823	730	2.72	11.3	39.9
1931	596	21,899	551	2.51	10.5	37.8
1932	479	16,975	377	2.22	9.8	35.2
1933	433	16,345	329	2.01	10.2	32.9
1934	450	18,036	346	1.92	10.9	31.1
1935	446	18,480	358	1.93	10.9	29.6
1936	490	22,416	412	1.84	13.6	29.3
1937	497	24,660	443	1.79	14.0	79.1
1938	453	21,663	406	1.87	13.2	28.1
1939	451	22,657	417	1.84	13.5	27.7
1940	454	23,770	417	1.75	14.0	27.2
1941	487	29,360	515	1.75	16.0	†..

* Including coaches, "combination" coaches, chair cars, sleepers, and dining cars but excluding baggage, express and mail cars.
† Comparable figures not yet available.

effort by the railways to secure a larger load per car is demonstrated further by the huge reduction that has been made in the price of passenger service (and in the revenues which the railroads derive from it). For example, 1941 passenger traffic volume was only 6 per cent less than in 1929, but the price of passenger service had been reduced 38 per cent and the revenues the railroads received from the service were 41 per cent less—this despite an improvement in the quality of the service which is without parallel in the history of the railroads.

The recent increase of 10 per cent in the rate of fare still leaves the railroad passenger with a tremendous travel bargain under present conditions, and the intensity of railroad travel indicates that this bargain is becoming more and more widely appreciated. If the public is made aware of the significant facts of the situation as it is developing—and if, knowing these facts, it will extend its co-operation to the railroads in acting upon them as the national interest requires—the time can be long postponed, if not avoided entirely, when persons, requiring railroad service, will have to be turned away.

Increased Track Capacity Quickly

On certain portions of some of the transcontinental lines, as well as on a few of the shorter lines leading to ports, the volume of traffic has increased to as much as twice the previous high record, and still further increases may be expected as the war program develops. On such lines it is becoming a serious problem to so increase the capacity of certain strategic sections of single-track, that delays to important traffic will be reduced, congestion relieved, and fewer locomotives required to handle this steadily rising volume.

Even though the construction of second track in such locations might be justified for future use, it is doubtful if it could be completed in time to be of use before the present emergency ends. On the other hand, modern signaling facilities can be planned and installed within a few months, and the installation of centralized traffic control, for example, including semi-automatic signals for authorizing train movements by signal indications, without time tables and train orders, will increase the capacity of an existing single track markedly. In fact,

Winning the War While Planning for Peace

One of our able and well-advised readers writes as follows:

"I have always felt that many executives do not take full advantage of the storehouse of factual information in the possession of their own organizations—largely because the average railroad executive is too greatly burdened with current pressing problems to give proper time to analytical studies for determining future policies.

"Such oversight is often dangerous, particularly when business is good. I so well recall during the prosperous late 'Twenties—when it was quite obvious that our prosperity came from 'flush' traffic, and our stable business, the kind that made up the life bread of the railroad, was rapidly disappearing—railroad managements were preoccupied with taking care of the current heavy traffic and enjoying the profits thereof, rather than taking on the onerous task of separating the wheat from the chaff, and then taking some comprehensive corrective action.

"If proper analyses and research had been followed then, the shock of the depression could possibly have been greatly cushioned.

"I have recently been wondering if we may not again be passing through the same kind of period and again making the same mistakes. Much of our present heavy traffic is even more of a 'flush' nature than that of the 'Twenties. On the other hand, there is also a great deal of it which is traffic we had lost in the past to cheaper forms of transportation, and will lose again for the same reason unless we do something to retain it, this time."

Other industry is now conducting research to maintain and improve its position after the war. There is every sound reason why the railroads—to the extent that they have not already done so—should begin now, individually and collectively, to analyze their position in the light of current and continuing developments to make plans to cushion the post-war shock.

Your observer saw a large air transport plane only recently which the designers said had sufficient capacity and economy successfully to compete with land express. There are those who will now question the ability of air transport to make such a place for itself in the transportation scheme. People of this frame of mind felt the same way, after the last war, with respect to the prospects of motor transportation.

Air transport is only one of the many threats to the maintenance of transportation by railroads which are developing.

Some say that the job now is to win the war, and they are quite right. But an efficient job of war-time railroading includes keeping posted on industrial, technical and traffic developments. These come so swiftly today that it requires specialized effort to keep up with them—nobody can do this job adequately in his spare time. But the railroad or other company which keeps competently up-to-date on current industrial, technical and traffic developments, in order to operate effectively during the war, has already done nine-tenths of all that needs to be done for realistic "post-war planning."

There is no incompatibility between working to win the war, and at the same time being prepared to meet the conditions of peace. An adequate job on the former includes the latter, almost as a necessary corollary. The British railways—with much longer experience at war than we have—have certainly come to this conclusion, as is evidenced by their appointing Sir Ernest Lemon of the L. M. S. to head up investigation of this kind in behalf of all the British railways.

the results which can be secured from proposed projects can now be predicted quite accurately by means of facts developed on numerous sections of centralized traffic control that are now in service. Roughly, the installation of C. T. C. on a busy single-track line will reduce the over-all time of trains an average of one minute for each mile of the installation. Following the installation of C. T. C. on one sub-division of more than 100 miles, a 29 per cent reduction was made in the average time of trains enroute, notwithstanding the fact that the number of trains increased 13.1 per cent, and the number of cars handled rose 18 per cent over previous peaks. Expressed in another way, a chief executive of one railroad has stated that new C. T. C. increases the capacity of single track to 75 per cent of that of double track.

By reducing the time spent on the road, locomotives can be dispatched on return trips sooner; thus fewer locomotives need be assigned to the freight power pool on a division. After C. T. C. was installed on one engine district, eight locomotives were released for use on other divisions. On another road, where the engine pool for a division included a certain number of large modern locomotives and a few older ones of less capacity, practically all of the trains are now handled by the larger locomotives, thus further increasing their speed as well as reducing the number of trains. On one road, the installation of C. T. C. was a major factor contributing to the practicability of closing an enginehouse at an intermediate point on a division.

It is evident that on those sections of single track, over which an increased volume of traffic must be moved as a vital part of the war program, centralized traffic control now warrants special consideration. Yet many well informed men who agree with this statement are reluctant to proceed because of the possible difficulties of securing the materials required for extensive C. T. C. projects. However, on those lines where increased track capacity is imperative, relays, coding equipment and signals required for centralized traffic control are small in quantity as compared with the materials required for second track or for additional locomotives. Furthermore, analyses are being made of methods to minimize the materials that are now required for C. T. C. as compared with those used in installations made previously.

A Discussion of Railroad Research

Railway Age has published a 36-page pamphlet, 8½ in. by 11½ in., to which has been given the title, "Railway Research—a Review." This booklet contains eleven articles on a variety of topics related to the general subject, especially economic and traffic research. The authors include the following:

F. H. Law, late vice-president, traffic, Illinois Central.

Stanley Berge, manager traffic research, Illinois Central (now on leave with the United States Navy).

H. A. DeButts, vice-president, Southern.

Kent Healy, associate professor of economics, Yale University.

H. W. Johnson, car accountant, St. Louis-San Francisco.

Carleton W. Meyer, assistant to president, New York Central.

T. H. Seay, comptroller, Southern.

Loyd J. Kiernan, railroad statistician, Equitable Life Assurance Society.

Walter S. Lacher, secretary, engineering division, Association of American Railroads.

J. R. Staley, freight traffic manager, Missouri Pacific.

The articles include descriptions of the traffic and economic research methods of two leading railroads, a consideration of some of the principal traffic and technological changes which are now revolutionizing the railroads' postwar prospects, and a discussion of a few of the specific problems which railroad economic research needs to try to answer. One of the papers deals specifically with some of the acute managerial problems to which the war has given rise. The material published in this pamphlet is, for the most part, new—and was written especially for this publication—although a few of the discussions are reprints. The emphasis throughout is on economic—that is, commercial—research, rather than on that into technological matters, although there is included an abstract of the A. A. R.'s comprehensive program of inquiry into important problems of the engineering department.

The greater emphasis on economic questions in this survey is ascribed in a foreword by J. G. Lyne, *Railway Age*'s assistant to the editor, to the fact that, relatively speaking, this kind of research by railroads has so far received very little printed attention. Mention research and most people visualize a man in a laboratory surrounded by test tubes—and that kind of research is of the greatest value. But this particular survey is more concerned with the kind of inquiry which consists of calls on shippers, analyzing commodity statistics, keeping posted on the latest business trends, putting to use the revealing data which every railroad has on its operations but which, so far, nobody has critically analyzed.

The pamphlet also contains some articles which, properly speaking, do not involve research at all—as the term is ordinarily understood. For example, two of these articles relate specifically what two railroads have done regarding the most practical immediate problem of getting more efficient use out of available freight cars. It is the contention in the foreword that these articles—while perhaps they do not illustrate the application of what is ordinarily conceived as "research"—do involve the application of what is called "the research method."

This method is described as that governed by "the unprejudiced, skeptical, curious, scientific attitude." When this method is applied to a problem of limited scope, it is nothing but just good, orthodox, sound and customary railroad practice. It becomes "research" simply when this practice of proven soundness is extended to cover those larger problems which every railroad manager has often wondered about, but has never had the time to get into.

The pamphlet does not aim to be comprehensive, nor carefully selective. Many developments would deserve inclusion in such a report, if its aspirations were more ambitious. Instead, it claims to be no more than an "interim report," a partial survey—something which, it is hoped, may stimulate thought and discussion, but without aspiring to be an encyclopedia or a course of selective readings on the subject.

A number of copies of the booklet have been acquired by the Association of American Railroads and have been circulated among chief executives of member roads. The *Railway Age* has a limited supply which are available, at 25 cents a copy, by addressing our New York office, 30 Church Street.

* All photographs by courtesy of the Canadian National

This View Was Taken as the Superstructure of the Bridge at Dorval, Que. Was Being Rolled Into the Final Location From Its Position on Falsework Alongside the Track

This C. N. R. Bridge Designed to Economize in Steel

Savings effected in through plate-girder span over highway by constructing deck largely of reinforced concrete

IN these days when the conservation of steel comprises an important phase of the war effort, engineers are turning to the development of designs for new structures that will require a minimum of structural steel. For this reason interest is attracted to a bridge spanning a highway subway that was constructed recently by the Canadian National. Because of the particular floor design that was adopted for this structure, the railroad estimates that the amount of structural steel actually used was about 36 per cent less than would have been required if it had been designed along conventional lines. The bridge is located at Dorval, Que., a point on

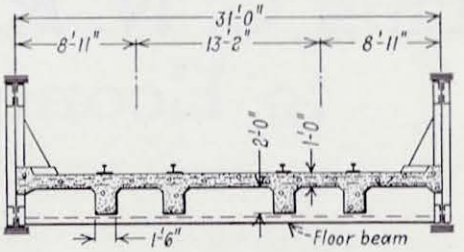
The New Double-Track Bridge, Comprising Only Two Girders, Has a Clear Span Between End Bearings of 114 Ft. 10¾ In.

This View of the Under Side of the Bridge Shows the Reinforced Concrete "T" Slab-and-Stringer Design

the company's double-track main line about 10 miles west of Montreal, where it carries the tracks across a new arterial highway. The latter embodies two 24-ft. traffic ways, separated by an 8-ft. center strip, and two 5-ft. sidewalks, one on each side of the highway. Thus, the combined width of the highway and the walks is 66 ft., but owing to the fact that the crossing is made at a sharp skew, the layout required a much longer span. Specifically, the skew angle is 51 deg. 50 min., making necessary a structure having a total length between the end bearings of about 115 ft. As intermediate supports were considered objectionable, it was necessary to design the structure with a single span. Also, because local conditions placed a definite limit on the extent to which the highway could be depressed, it was imperative that the depth of the bridge deck be kept to a minimum.

To meet these requirements, a through plate-girder structure on concrete abutments, with a clear span of 114 ft. 10¾ in. between end bearings, was chosen for this location. As noted at the outset, it is the floor system of the structure that is of special interest. Briefly, this consists of a reinforced concrete "T" slab-and-stringer design, with a reinforced concrete stringer directly under each rail, spanning between steel floor beams which are encased in concrete. Also, following a policy that is used widely on the Canadian National, the deck is without ties, ballast or waterproofing, the rails being carried on malleable iron chairs that are bolted directly to the concrete slab floor.

Through the use of this type of floor design and the omission of the ballast, in preference to the conventional design embodying a structural-steel floor system encased in concrete and with a waterproofed ballasted deck, the railroad estimates that a number of advantages resulting in economies were obtained. First, there is the very considerable saving in the use of structural steel in the deck and the main girders that was effected through the use of the reinforced concrete slab-and-stringer construction. Also, it is pointed out that the particular floor design used, with its ballastless deck, made possible the use of only two girders, instead of the four that would otherwise have been required. As a result, it was not necessary to go to the heavy expense of widening the track centers at the bridge and for a considerable distance on both approaches, an expedient that would have been required if the structure had consisted of two girders for each track.



Cross Section Through the Girders and Deck Structure

The two main girders in the bridge are 10 ft. ½ in. high between the backs of the flange angles, and are 31 ft. apart. Spanning between them at intervals of 10 ft. 9⅜ in. are the floor beams, which consist of built-up members having a depth of 3 ft. 2½ in. between the backs of the flange angles. These beams extend up into the floor slab and are themselves encased in concrete down to the top sides of the lower flange angles. The trimmer floor beam at each end of the bridge is of the same size and construction as the floor beams and is also encased in concrete.

Spanning between the floor beams are the reinforced concrete stringers, which are cast integrally with the floor slab and the concrete encasing the floor beams. As noted previously, there is a concrete stringer under each rail. The stringers are 1 ft. 6 in. wide and 2 ft. deep and are heavily reinforced, as is the slab, which is 12 in. thick. Throughout the deck construction, shelf angles were used extensively as a means of holding the reinforcing steel in position and of fastening it to the floor beams and girders.

The existing track rails, which are of the 131-lb. Headfree type, were replaced on the deck of the new bridge. As noted previously, the rails rest on chairs that are bolted directly to the concrete deck slab, being separated from the latter only by rubber shims. The plates are of the double-shoulder type, are 1$\frac{3}{16}$ in. thick and are of malleable iron. At each plate two 1-in. round

(*Continued on page 694*)

View of One of the Abutments, Taken While the Temporary Bridge Was Being Removed, Showing the Pre-Cast Triangular Concrete Slabs in the Backwall

James E. Gorman Passes On

Long Time Head of Rock Island System, and one of the nation's most widely known railway executives, dies at age of 78

James E. Gorman

AS reported in the *Railway Age* of March 28, James E. Gorman, president, a director and chairman of the executive committee of the Chicago, Rock Island & Pacific, and since 1933 one of the trustees for the company, died on March 25 in the St. Francis hospital, Evanston, Ill., following an attack of influenza. The death of Mr. Gorman brings to a close nearly 65 years of railroad service, comprising one of the most colorful careers in railroad annals, that of a man who rose from yard clerk to president of one of the largest middle western railroad systems in the country.

Mr. Gorman rose through the traffic department of the Atchison, Topeka & Santa Fe, later going to the Rock Island in an executive capacity. At the time of his death he was considered the dean of railway traffic men and in later years, although executive responsibilities took more of his time, he continued to take a broad interest in traffic matters and in public relations work. Perhaps the outstanding trait of Mr. Gorman was his tact and diplomacy, which made him one of the highly regarded railroad executives in the country and gained for him a host of real friends among subordinates as well as executives. Mr. Gorman was noted for his fair dealing and employees, shippers and other business associates all knew that his word was as good as his bond. He also engaged extensively but quietly and unostentatiously in a great amount of charitable work and his contributions in this field were so outstanding that he was decorated some years ago by the Pope with the Order of the Knights of Malta.

During his career as chief executive of the Rock Island, Mr. Gorman has seen the net income of that road rise from a deficit of $386,389 in 1915 to a net income of $8,078,189 in 1916; decline again to a deficit of $10,793,964 in 1920; rise again to a net income of $14,007,321 in 1929, and decline to a deficit of $11,055,216 in 1933.

During this period, the Rock Island although having its ups and downs, continued a policy of judicious expenditures to effect operating economies and progressed steadily in the modernization of its equipment and fixed properties, particularly in the years from 1926 to 1931. During these years, 54 modern 4-8-4 steam locomotives were purchased for heavy freight service, a large amount of new and heavier rail was laid, and ties and ballast were applied liberally, bringing the road up to a high standard of maintenance. At the same time a number of large construction projects were completed, including a line 152 miles long, between Liberal, Kan., and Amarillo, Tex., which gave the road access to new oil fields north of Amarillo; a line 62 miles long between Morse, Tex., and Dalhart, which gave the road access to a rich wheat growing area; the double tracking of the main line between Topeka, Kan., and Herington; and the double tracking for some distance in the vicinity of the Trenton, Mo., and Allerton, Iowa, terminals. A new line, approximately 6 miles in length, through Oklahoma City, Okla., was constructed in 1930 which cost about $2,500,000 and a new depot, joint with the St. Louis-San Francisco, was also constructed at that point. This change avoided heavy track elevation expenditures and provided improved operating conditions through the city.

Probably the most outstanding construction completed during the period in which Mr. Gorman was responsible for the policies of the company was the Coburn, Mo., to Birmingham line, 82.4 miles long, which provided the Rock Island with a 0.5 grade line with few and easy curves through one of the roughest regions of Northwest Missouri. This line, which was completed in July, 1931, and which not only reduced the grade as compared to the former route, also substantially reduced the distance and curvature between the Trenton, Mo., and Kansas City, terminals, and permitted the road to terminate its use of the Chicago, Burlington & Quincy line between Cameron Junction, Mo., and Birmingham.

The foresight which was exercised in the boom years to build up the road helped it in a considerable measure in the succeeding depression years and in a large sense

is a tribute to the wisdom and foresight of James E. Gorman who was responsible for the guidance and the planning for the railroad during that period.

Mr. Gorman's Career

Mr. Gorman was born at Chicago, on December 3, 1863, and entered railway service with the Chicago, Burlington & Quincy at Chicago in August, 1877, taking car numbers. He was later assistant yard clerk, clerk in the claim department, voucher clerk and tariff clerk on that road. From March, 1885, to April, 1887, he was a clerk in the general freight office of the Chicago & North Western and in the latter month he went with the Chicago, Santa Fe & California (now the Atchison, Topeka & Santa Fe) as chief clerk in the general freight department. Two years later he became tariff clerk in the general freight office of the Illinois Central, returning to the Santa Fe in March, 1890, where he served as clerk and later as chief clerk.

In December, 1893, he left railroad service to become traffic manager for Joy Morton & Co., but returned again to the Santa Fe in March, 1895, as chief clerk to the traffic manager. Six months later, he was promoted to assistant general freight agent, with headquarters at Chicago, and in September, 1899, he was advanced to general freight agent, following which he was consecutively assistant freight traffic manager and freight traffic manager. On December 15, 1909, he left the Santa Fe to become first vice-president in charge of traffic of the Rock Island. In April, 1915, when the road went into the hands of the receivers, Mr. Gorman was appointed chief traffic officer and on November 1, 1915, he was appointed chief executive officer.

On June 22, 1917, Mr. Gorman was elected president of the Rock Island and the receivership of the road was terminated two days later. A year later, under the U. S. Railroad Administration, he was appointed federal manager and with the return of the railroads to private ownership in March, 1920, he again assumed the duties of president. In 1933, when the Rock Island went into trusteeship under the Federal court, Mr. Gorman was chosen as one of the three trustees, retaining his position as corporate president. He has been chairman of the Western Railways' Committee on Public Relations since 1930 and always retained an active and broad interest in traffic matters.

* * *

Willey House Station, N. H., on the Maine Central's Line Between Portland, Me., and St. Johnsbury, Vt., Recalls Hawthorne's Short Story "The Strange Guest," Describing a Fatal Avalanche at This Point

C. N. R. Bridge Designed to Economize in Steel

(Continued from page 692)

bolts are cast into the slab, which are fitted with nuts, clips and spring washers for holding the rail.

The new bridge is designed for Cooper's E 60 loading. Medium carbon steel was used for the structural members, which were proportioned on the basis of a design stress of 20,000 lb. per sq. in. in tension and 12,500 lb. in shear. The concrete in the deck, which was consolidated with mechanical vibrators, was designed to give a compressive strength of 3,000 lb. per sq. in. If conventional construction had been employed for this bridge, the railroad estimates that it would have required approximately 660,000 lb. of structural steel. As built, it contains only 421,000 lb. of such steel, a reduction of 239,000 lb., or 36 per cent. As noted at the outset, the substantial economy represented by this saving is of particular significance in view of the present emergency.

The procedure that was employed in constructing the bridge involved the erection of the superstructure as a complete unit on falsework to one side of the tracks, and the construction of the abutments under traffic while the tracks were carried on a temporary bridge. The abutments are largely of conventional construction except that, because of the skew layout, they are built with triangular projections on their back sides at the locations where the tracks pass over them so that the rear edge of the concrete will be square with the rails. The rails are supported on, and fastened to, the tops of these projections by the same means that is employed on the deck of the structure.

The temporary bridge on which the tracks were carried during the construction of the abutments was of trestle construction, except that steel-beam spans were employed for carrying the tracks across the locations of the abutments. Hence, because of the presence of these spans, it was necessary during the construction of the abutments to leave gaps in the backwalls at the locations of the triangular portions. For this reason the upper part of each triangular portion was constructed separately as a precast unit, being inserted in its proper position a short time before the bridge span was rolled into position.

Method of Installation

The procedure that was followed in rolling the new span into position generally followed usual practice. In preparation for this work, nests of steel rollers, operating on beds of old rails, were installed under the ends of the span. Two donkey engines were used to draw the bridge into position, one for each end, which pulled on steel cables attached to the bottom flange angles of the girders and anchored to the abutments. The work of installing the new bridge was carried out between trains, and the entire operation, from the time the rails were cut until the bridge was in its final position ready to receive traffic, was performed in six hours.

All work involved in the construction of the bridge, including the furnishing and erecting of the steel, was carried out under contract by the Dominion Bridge Company, Lachine, Que., except that the precast triangular blocks for the abutments were constructed by railroad forces. We are indebted to C. P. Disney, bridge engineer of the Canadian National, Central region, for the information contained in this article. F. L. C. Bond is vice-president and general manager, and B. Wheelwright is chief engineer of the Central region.

Storekeepers Build Up Inventories To War Strength

Working stocks restored to pre-depression levels to protect increased operations—Release $58,000,000 of scrap

HAND in hand with railway operations that took 200-million dollars more materials in 1941 than in the previous year, railway working stocks have been put on a war basis again by increases in the supply of ready-to-use materials and supplies which gave the railroads of the United States $127,000,000 more unapplied materials and fuel on January 1 of this year than on January 1, 1941, and about $135,000,000 more than on January 1, 1940. This increase of 37 per cent over the total inventory on January 1, 1941, brought working stocks to higher levels than in any of the last ten years when stocks were cut to the bone. It was, however, approximately $11,000,000 less than the year-end total in 1929 and impressively less than in either the last war years or the post-war years and represented a smaller aggregate inventory in relation to operating revenues than in any year since 1915, with the exceptions of 1928, 1929, 1930, 1936, 1939 and 1940. The total inventory on January 1, moreover, did not reflect uniformly large increases on all roads and left almost all of the railroads with substantially less new and relay rail tonnages available than in many previous years.

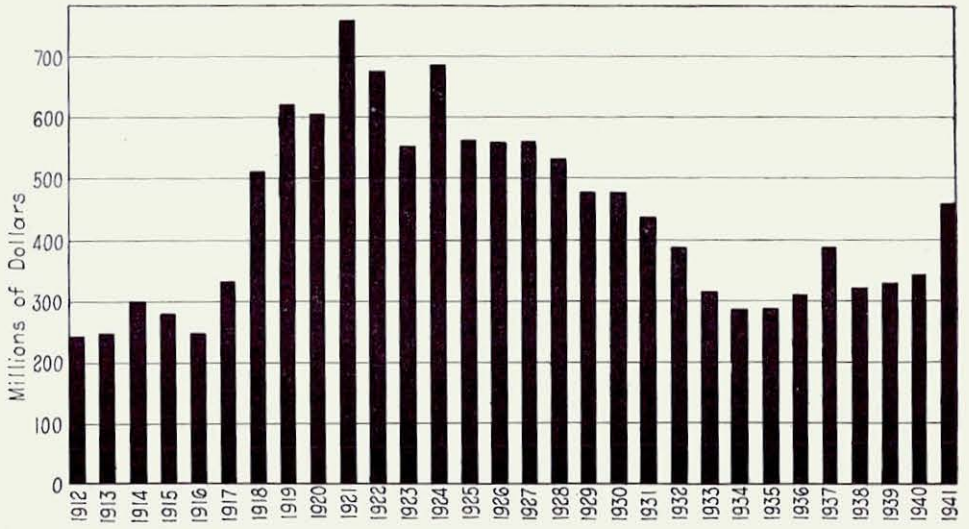
$466,000,000 in Stock

The money tied up in unapplied materials and supplies on the Class I railroads, switching and terminal companies and other roads in the United States amounted to approximately $466,170,000 on January 1, as compared with $339,156,000 on January 1, 1941 and $331,716,000 on January 1, 1940. It was larger by $75,799,000, or 19 per cent, than on January 1, 1938, following the pile up of material in the "little boom" year of 1937; less by $50,871,000, or 10 per cent, than on January 1, 1918, following the entrance of the United States in the first world war; and, dollar for dollar, the total was less by $301,097,000, or 39 per cent, than on January 1, 1922, following the return of the railroads to private operation after the period of Federal control at the end of March, 1920. While railway inventories include much stand-by material to protect the service from failures of material in use and the relative changes in the inventory values would, therefore, be greater if only active stocks were considered, almost all the railroads carry materials in their inventories at cost until

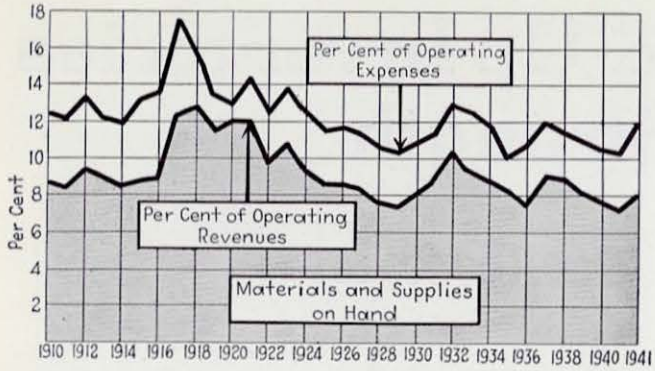
Materials and Supplies on Hand, United States Railroads*

	Amount	Reduction	Per cent of Op. Rev.	Per cent of Op. Exp.
June 30, 1911	$244,932,000	$	8.6	12.4
June 30, 1912	246,790,000	+1,858,000	8.5	12.1
June 30, 1913	300,601,000	+53,811,000	9.4	12.4
June 30, 1914	278,940,000	21,661,000	8.9	12.2
June 30, 1915	248,888,000	30,052,000	8.4	11.9
Dec. 31, 1916	333,361,000	+84,473,000	9.0	13.7
Dec. 31, 1917	514,051,000	+180,690,000	12.5	17.6
Dec. 31, 1918	641,759,000	+127,708,000	12.9	15.8
Dec. 31, 1919	608,527,000	33,232,000	11.6	13.5
Dec. 31, 1920	767,267,000	+158,740,000	12.1	12.9
Dec. 31, 1921	676,125,000	91,142,000	12.0	14.4
Dec. 31, 1922	556,260,000	119,865,000	9.7	12.3
Dec. 31, 1923	693,078,000	+136,818,000	10.8	13.9
Dec. 31, 1924	569,690,000	123,388,000	9.4	12.3
Dec. 31, 1925	535,126,000	34,564,000	8.6	11.5
Dec. 31, 1926	561,007,000	+25,881,000	8.6	11.8
Dec. 31, 1927	532,063,000	28,944,000	8.5	11.4
Dec. 31, 1928	478,625,000	53,438,000	7.7	10.6
Dec. 31, 1929	477,051,000	1,574,000	7.5	10.4
Dec. 31, 1930	437,375,000	39,676,000	8.2	11.0
Dec. 31, 1931	379,992,000	57,383,000	8.9	11.5
Dec. 31, 1932	321,595,000	58,397,000	10.8	13.1
Dec. 31, 1933	296,069,000	25,526,000	9.3	12.9
Dec. 31, 1934	302,346,000	+6,277,000	9.1	12.2
Dec. 31, 1935	284,560,000	17,786,000	8.2	10.8
Dec. 31, 1936	311,738,000	+27,178,000	7.6	10.5
Dec. 31, 1937	390,371,000	+79,303,000	9.3	12.3
Dec. 31, 1938	322,161,000	68,210,000	8.9	11.6
Dec. 31, 1939	331,716,000	+9,555,000	8.2	10.9
Dec. 31, 1940	339,156,000	+7,440,000	7.8	10.8
Dec. 31, 1941	466,170,000	+127,014,000	8.5	12.6

* Includes Class I, II, III and switching and terminal railroads.



Materials and Supplies in Stock on the Railroads of the United States January 1 Each Year Unadjusted for Changes in Material Costs



Trends in the Relation of the Aggregate Value of Materials and Supplies on Hand at the Close of Each Year to Annual Revenues and Operating Expenses, 1910-1941

they are used, so that changes in values from month to month or from year to year reflect, for all practical purposes, corresponding changes in volume, except during the post-war period and in 1932 and 1933 when material prices were unusually depressed.

The total inventory on January 1 of this year was equivalent to $1,950 of unapplied materials and fuel per mile of road and was equivalent to 8.5 per cent of the annual operating revenues for 1941 and to 12.6 per cent of the corresponding annual operating expenses. This compares with $1,450 of materials per mile of road on January 1, 1941 and $1,400 per mile of road on January 1, 1940; 7.8 per cent of operating revenues and 10.8 per cent of operating expenses for the year 1940, and 8.2 per cent of operating revenues and 10.9 of operating expenses in 1939. The ratio of the dollar value of unapplied materials to annual operating revenues was 7.6 per cent on January 1, 1937 and 7.5 per cent on January 1, 1930, but the corresponding ratios were as high as 12.9 per cent on January 1, 1919, in the case of operating revenues and 15.8 per cent in the case of operating expenses. Aggregate inventories were 8.5 per cent of operating revenues and 12.1 per cent of operating expenses on June 30, 1912. In only 9 of the last 30 years was the ratio of year-end inventories less than 12.6 per cent of operating expenses and in only 12 of the last 30 years was the ratio less than 8.6 per cent of operating revenues.

Materials on Hand, December 31, 1940, Class I Railroads

	Fuel (000)	Days' Stock*	Cross-ties (000)	Months' Stock*	Rail, New & S. H. (000)	Months' Stock*
1929	$40,000	32	$95,000	8.1	$45,000	3.9
1930	28,200	40	101,200	10.9	44,700	4.9
1931	23,600	31	86,150	11.7	49,250	8.5
1932	20,500	36	67,200	14.8	48,100	18.0
1933	17,950	37	50,950	13.0	33,600	14.0
1934	19,930	34	47,297	11.0	36,885	13.0
1935	22,218	37	42,020	9.9	34,275	11.7
1936	26,137	36	40,542	8.9	31,226	6.5
1937	30,812	39	54,622	11.5	31,123	5.6
1938	23,769	34	54,716	12.9	26,969	7.6
1939	23,732	33	47,795	10.2	26,491	5.5
1940	24,002	32	50,967	11.0	25,985	4.6
1941	40,040	45	48,426	9.4	23,986	3.7

	Miscellaneous (000)	Months' Stock*	Scrap (000)	Months' Stock*	Total (000)	Months' Stock
1929	$292,000	3.5	.....	..	$472,000	3.8
1930	246,500	3.8	$10,300	..	430,900	3.8
1931	203,869	4.4	13,200	..	374,331	4.5
1932	170,000	5.5	12,800	..	316,800	5.9
1933	178,091	5.7	10,700	..	291,291	5.8
1934	181,455	5.0	11,898	..	297,465	4.6
1935	171,920	4.7	9,427	3.1	279,926	4.3
1936	199,743	4.4	9,926	2.1	307,574	4.0
1937	256,988	4.8	12,356	2.1	385,912	4.2
1938	200,566	5.8	11,542	3.7	317,562	4.8
1939	219,717	4.9	10,073	2.6	327,190	4.2
1940	223,673	4.4	9,818	1.9	334,445	3.9
1941	338,839	5.5	8,808	1.8	460,099	4.5

* Days' or months' stock based on average consumption per day or month during previous year.

Material Consumption Soars

Class I railroads, according to the thirteenth annual analysis of year-end inventories and railway material consumption which has been made by *Railway Age* from special reports received from practically every Class I railroad, applied or consumed (not purchased) approximately $1,196,000,000 of materials, supplies and fuel in 1941, as compared with $990,457,000 in 1940, $902,480,000 in 1939, $760,875,000 in 1938 and $1,051,017,000 in 1937 and they obtained at least $58,010,000 from the sale of railroad scrap last year, as compared with $62,389,000 in 1940, $53,337,000 in 1939, $36,929,000 in 1938 and $68,552,000 in 1937. Total disbursements in 1941 included approximately $325,368,000 for coal and fuel oil, as compared with approximately $269,556,000 in 1940, $250,725,000 in 1939 and $246,563,000 in 1938. They also included approximately $78,168,000 for new and relay rail, as compared with $67,103,000 in 1940, $57,903,000 in 1939 and $42,420,000 in 1938. Of the rail laid in 1941, $33,313,000 was reported as new rail, $19,405,000 was reported as relayer rail, while $25,449,000 was unclassified. In addition, aggregate disbursements in 1941 included $61,518,000 of crossties, as compared with $55,864,000 in 1940, $56,142,000 in 1939 and $50,889,000 in 1938, while storehouse and miscellaneous materials, chiefly for maintenance and repairs, used in 1941 totalled $730,859,000, as compared with $597,913,000 in 1940, $537,711,000 in 1939 and $421,002,000 in 1938. Materials consumed include second hand and shop-manufactured materials, as well as newly purchased supplies.

Based on a dollar value of crosstie disbursements re-

Materials in Stock—Class I Railroads

	Fuel (000)	Rail—New and S. H. (000)	Cross ties (000)	Stores Stock (000)	Scrap (000)	Total (000)
			Year 1939			
Jan. 1	$22,660	$24,733	$59,491	$199,477	$11,200	$317,561
Feb. 1	25,594	24,691	61,796	196,330	10,393	318,840
Mar. 1	27,100	26,229	63,346	196,669	10,239	323,583
Apr. 1	29,445	27,695	65,246	197,383	10,686	330,455
May 1	24,101	28,459	60,749	203,806	11,217	328,332
June 1	21,048	29,345	57,067	205,169	11,548	324,177
July 1	18,732	30,520	52,809	205,027	11,761	318,849
Aug. 1	20,175	30,026	52,158	197,960	12,023	312,342
Sept. 1	21,165	29,137	51,375	194,802	12,384	308,863
Oct. 1	21,512	28,274	49,592	193,025	12,235	304,638
Nov. 1	20,800	26,642	47,330	197,378	11,722	303,872
Dec. 1	23,866	25,972	51,309	198,564	11,021	310,732
			Year 1940			
Jan. 1	21,778	25,552	51,359	216,996	11,551	327,236
Feb. 1	22,454	28,213	58,187	222,127	11,862	342,843
Mar. 1	23,190	31,546	60,615	230,045	11,576	356,972
Apr. 1	21,016	34,388	64,466	234,899	11,509	366,278
May 1	21,343	35,826	63,945	234,866	11,551	367,531
June 1	22,419	34,818	60,070	231,308	11,275	359,890
July 1	22,310	35,138	57,452	225,066	11,371	351,337
Aug. 1	24,065	34,134	55,988	222,001	11,326	347,514
Sept. 1	25,513	31,927	54,531	217,948	11,041	340,960
Oct. 1	25,442	30,055	53,517	216,201	10,848	336,063
Nov. 1	22,272	27,457	50,374	221,444	9,711	331,258
Dec. 1	24,414	27,674	54,464	213,555	9,602	329,709
			Year 1941			
Jan. 1	24,002	25,985	50,967	223,673	9,818	334,445
Feb. 1	24,591	26,600	60,311	220,887	10,728	343,117
Mar. 1	27,105	28,217	62,455	228,012	10,859	356,648
Apr. 1	30,984	28,573	65,356	235,404	11,102	371,419
May 1	23,486	25,649	58,349	251,691	9,632	368,807
June 1	24,578	26,461	57,051	252,972	10,347	371,419
July 1	25,991	24,389	51,551	266,019	9,669	377,619
Aug. 1	29,299	25,156	55,976	265,886	10,264	386,581
Sept. 1	32,632	24,500	51,745	276,661	10,380	395,918
Oct. 1	34,035	25,755	44,327	298,149	9,704	411,970
Nov. 1	37,455	24,009	44,452	309,295	9,377	424,588
Dec. 1	37,668	23,979	46,632	320,572	8,181	437,032
			Year 1942			
Jan. 1	40,040	23,986	48,426	338,839	8,808	460,099

ported by 120 railroads and quantities reported by 93 of these railroads, the Class I line-haul railroads in the aggregate are estimated to have laid approximately 48,750,000 crossties in 1941, as compared with 46,000,000 in 1940, 44,200,000 in 1939 and 42,000,000 in 1938, and they sold approximately 3,385,000 tons of scrap, as compared with 2,900,000 tons in 1940, 3,700,000 in 1939 and 255,000 tons in 1938.

Rail Stocks Low

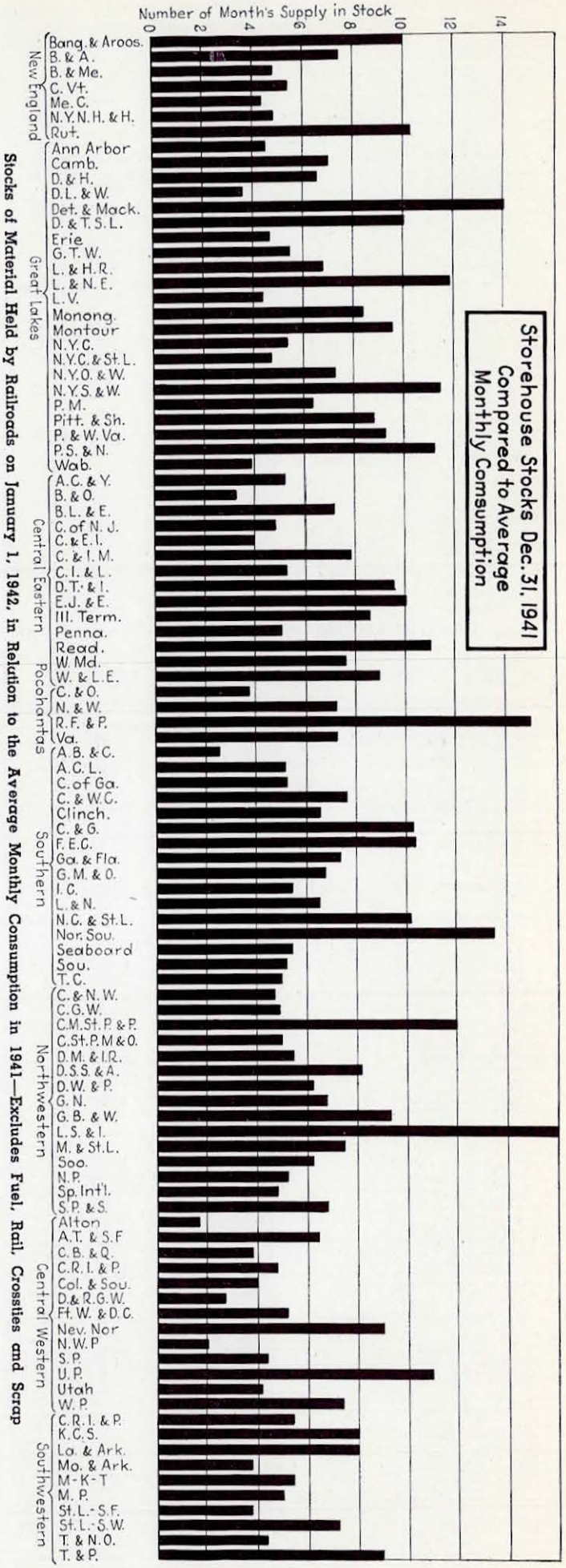
Stock balances of the Class I line-haul railroads at the close of 1941 totaled $460,099,000, as compared with $334,445,000 at the close of 1940, $327,190,000 at the close of 1939 and $317,562,000 at the close of 1938. The total included $40,040,000 of coal and fuel oil, as compared with $24,002,000 on January 1, 1941, and $23,732,000 on January 1, 1940, but they included only $23,986,000 of new and relay rail, as compared with $25,985,000 of new and relay rail on January 1, 1941, $26,491,000 on January 1, 1940, $33,600,000 on January 1, 1934, and $45,000,000 on January 1, 1930. Dollar for dollar, rail stocks on January 1 this year were lower than in any month since January 1, 1936 and represent an aggregate decline of 2.5 per cent since January 1, 1939, the first year of war preparations, and a decline of approximately 27 per cent since January, 1936, before the first war boom.

The crosstie inventory on January 1 of this year totaled $48,426,000, which is the lowest for 60 months, with the exception of the last three months of 1940 and represents an aggregate decline of 18 per cent since January 1, 1939. Stocks of storehouse materials, including maintenance and repair supplies other than rail and crossties, totaled approximately $338,839,000 on January 1, which was an increase of $115,166,000, or 48 per cent, over the corresponding inventory on January 1, 1941, while the fuel inventory on January 1 was an increase of approximately $16,000,000, or 67 per cent, over the corresponding aggregate one year previous. Line-haul railroads purchased materials in 1941 for other railroads and several railroads sold materials last year as in 1940 to contractors of trackage for military projects. Some railroads did not report these sales and other railroads did not segregate materials sold from materials used. However, 80 railroads reported the sale of $13,189,000 of materials of this character, other than iron and steel scrap during 1941.

4.5 Months' Supply

Based on the average month's consumption of materials in 1941, fuel stocks on January 1 represented 45 days' requirements, as compared with 32 days' use on January 1, 1941, and a 34 days' consumption on January 1, 1939. Crossties on hand January 1 represented only 9.4 months' supply, as compared with 11.0 months' on January 1, 1941, and 12.9 months on January 1, 1938. Stores stocks on January 1 in the aggregate represented 5.5 months usage, as compared with 4.4 months on January 1, 1941, 5.8 months on January 1, 1938, 5.7 months on January 1, 1934, and 3.5 months requirements on January 1, 1930. Total materials and supplies in the hands of the Class I railroads at the beginning of this year indicated a 4.5 months supply, which compares with a 3.9 months supply on January 1, 1941, a 4.8 months supply on January 1, 1939, a 5.9 months supply on January 1, 1933, and 3.8 months supply at the beginning of January, 1930 and 1931.

The annual inventories and annual consumption of materials on different railroads are given in detail in



Stocks of Material Held by Railroads on January 1, 1942, in Relation to the Average Monthly Consumption in 1941—Excludes Fuel, Rail, Crossties and Scrap

Materials and Supplies Used and

Road	Fuel					Rail—New				Rail—Old				Crossties			
	On Hand			Used		On Hand		Used		On Hand		Used		On Hand			
	Dec. 31	Inc. or %	Day's Stock	1941	Inc. or %	Dec. 31	Inc. or %	1941	Inc. or %	Dec. 31	Inc. or %	1941		Dec. 31	Inc. or %	Month's Stock	
Bangor & Aroostook	$151,716	56	136	$403,850	—3	$27,998	—9	$72,133	—55	$23,534	—66	$71,794		$84,819	—22	13.4	
Boston & Albany	401,055	3T	58	2,601,205	14	6,843	18	154,447	24	108,791	—16	81,072		110,169	—31	10.4	
Boston & Maine	651,416	210	46	5,011,442	19	63,233	58	459,017	6	188,245	1	304,419		633,856	—8	10.5	
Central Vermont	313,779	300	124	908,385	23	9,095	—45	44,716	—45	63,059	—12	37,574		75,125#	—34	13.6	
Maine Central	119,982	27	26	1,670,270	25	12,353	—58	18,200	—72	53,364	—35	65,928		141,243	—45	5.2	
New York, New Haven	1,176,232	25	72	6,024,058	27	98,756	—37	738,726	64	209,250	—29	537 670		562,625	—33	20.5	
Rutland	164,119	200	95	632,643	40	19,126	180	10,148	22	15,725	12	6,562		21,348	8	8.1	
NEW ENGLAND REGION‡	2,978,299	..	62	17,251,853	..	237,404	..	1,537,384	..	661,968	..	1,105,019		1,629,185	..	12.0	
Ann Arbor	62,303	78	41	544,432	10	83	..	21	..	10,109	—30	22,845		10,602	—2	2.2	
Cambria & Indiana	932	80	7	47,124	16	221	—50	13,872	45	2,933	12	5,231		1,988	—55	6.7	
Delaware & Hudson	401,755	4	49	2,975,712	27	61,906	110	404,868	—1	114,995	—5	170,208		367,692#	—28	6.5	
Delaware, Lack. & West.	610,011	6T	43	5,097,851	12	9,465	5T	274,704	23	119,041	38	142,478		249,393	48	9.0	
Detroit & Mackinac	8,449	—7	45	67,811	18	....	..	..	..	25,056	—5	25,057		20,424	25	12.0	
Detroit & Toledo Shore	34,524	—28	74	171,976	9	133	..	9,342	10?	8,056	30	3,968		4,281	—69	1.7	
Erie	390,029	100	21	6,624,747	15	31,583	60	895,818	—2	139,807	—21	472,636		601,494	—7	11.5	
Grand Trunk Western	611,470	120	100	2,292,992	20	6,394	—19	101,616	—55	78,959	—54	168,526		187,897	64	4.1	
Lehigh & Hudson River	12,147	150	30	144,798	—9	1,320	—95	29,113	84	3,174	95	1,315		7,875	—42	3.6	
Lehigh & New England	106,009	46	104	366,074	24	9,027	—84	448	..	49,511	..	52,548		30,932	—3	12.0	
Lehigh Valley	404,156	100	35	4,608,368	16	42,692	6	72,815	—8	64,764	—48	183,697		282,037	1	10.5	
Monongahela	2,976	90	7	161,487	23	1,211	—8	17,150	—59	7,479	—54	24,099		2,910	—79	.5	
Montour	1,073	3	3	123,099*	15	17,539†	—62	8,671*	—4	Not sep.	..	Not sep.		1,616	7T	1.2	
New York Central	2,188,101	90	36	22,998,864	18	1,453,016†	—5	6,491,220†	45	Not sep.	..	Not sep.		4,652,122	12	12.0	
N. Y. C. & St. L.	227,038	13	19	4,387,150	23	17,457	None	311,394	—31	63,779	—37	241,895		402,695	4	8.6	
N. Y., Ont. & W.	78,864	54	30	851,154	23	799	—50	927	—61	10,594	—44	7,265		13,177	8	8.5	
N. Y., Sus. & W.	36,721	..	47	278,074	..	11,520	..	21,222	..	6,007	..	5,097		3,506	..	5.5	
Pere Marquette	334,736	30	37	3,428,602	16	10,501	—25	312,564	70	147,297	80	268,142		662,455	—11	10.2	
Pitt. & Shawmut	3,171	130	17	68,086	6	28	..	..	..	3,064	40	15,458		14,797	—35	4.1	
Pitt. & West. Va.	41,166	470	6	243,743*	40	23,135†	—57	70,056*	—11	Not sep.	..	..		49,153	100	15.0	
Pitt., Shawmut & Nor.	1,722	20	6	100,850	58	15,517	..	5,233	..	6,476	—17	7,840		5,294	—73	1.5	
Wabash	349,387	120	39	3,229,342	14	30,105	—20	625,005	—3	165,618	1	458,457		465,505	17	7.1	
GREAT LAKES REGION‡	5,906,740	..	36	58,812,336	..	1,743,652	..	9,666,065	..	1,017,719	..	2,276,774		8,028,815	..	10.4	
Akron, Cant. & Young	2,846	—20	6	165,297	30	5,781	85	38,429	..	4 486	130	15,883		23,710	—32	3.7	
Baltimore & Ohio	510,093	40	15	13,386,199	24	77,868	190	1,362,143	—30	287,648	10	496,560		1,099,377	10	5.1	
B. & O. C. T.♦	23,268	—10	13	623,049	24	21,229	37	56,404	—8	23,501	6	33,628		32,999	160	7.1	
Belt of Chicago♦	47,451	56	29	586,101	10	21,093	—25	59,106	—21	3,796	—83	45,924		79,686	1	9.0	
Bessemer & Lake Erie	138,032	..	84	599,069	..	9,478	..	177,356	..	35,190	..	84,432		21,367	..	1.7	
Central of New Jersey	349,426	190	35	3,560,731	16	57,724	200	192,628	—20	11,281	25	119,837		195,933	32	7.6	
Chicago & Eastern Ill.	169,475	—35	60	1,025,552	17	6,693	—49	272,631	1	59,223	29	102,227		145,617	—8	8.9	
Chicago & Illinois Mid.	25,205	—42	45	203,647	4	2,014	5	89,422	—12	22,733	—25	41,653		30,042	110	10.0	
Chicago & Western Ind.	14,127	44	34	152,492	1	27,991	—7	60,452	1	12,882	—45	24,267		33,372	—8	7.2	
Chicago, Ind. & Louis.	25,338	60	18	513,783*	8	97,676	8T	110,792*	50	Not sep.	..	Not sep.		90,310	1	14.0	
Detroit, Toledo & Iron.	32,735	150	33	354,784	20	16,539	160	20,491	—82	26,232	—25	21,596		122,775	10	22.5	
Elgin, Joliet & East.	61,163	190	23	969,189	15	72,874	—67	249,645	200	56,218	150	74,952		125,018	—5	5.0	
Illinois Terminal	4,822	3T	200	85,508	4	29,267	50	49,962	80	9,459	—65	37,052		68,845	—7	10.0	
Long Island	52,374	—10	19	1,018,194	17	210,218	2T	41,399	28	35,330	4	61,694		201,978	3T	14.6	
Pennsylvania	3,749,482	170	50	27,617,265	30	1,831,313	6	4,084,086	26	938,354	22	3,114,990		3,774,395	—10	10.0	
Penna.-Read. S. S. L.	27,895	—20	20	498,644	7	2,116	21	8,657	—20	17,370	—48	41,394		31,036	26	3.3	
Reading	874,537	210	60	5,351,549	15	31,633	—83	221,368	28	36,754	—50	87,484		230,122	—49	6.5	
Western Maryland	112,149	90	33	1,211,461	18	29,324	—32	218,598	—5	14,384	—39	65,586		392,734	28	18.0	
Wheeling & Lake Erie	122,838	12C	46	962,246	22	91,859	105	248,275	—4	87,072	1	106,072		165,729	4	6.5	
CENTRAL EASTERN REGION‡	6,258,410	..	40	57,523,118	..	2,572,377	..	7,379,792	..	1,641,744	..	4,471,332		6,719,988	..	8.3	
Chesapeake & Ohio	504,351	120	31	5,924,161	16	7,066	—68	1,518,088	8	225,883	78	1,017,603		775,175	24	10.2	
Norfolk & Western	351,838	110	27	4,746,290*	16	490,400†	—11	1,700,826*	10	Not sep.	..	Not sep.		823,421	4	27.9	
Richmond, Fred. & Pot.	120,336	48	38	1,139,105	32	51,147	—34	74,934	None	29,090	12	15,174		172,241	68	8.0	
Virginian	135,228	9T	43	1,133,422	30	38,514	7T	541,010	—39	218,598	—41	117,752		334,702	—12	26.5	
POCAHONTAS REGION‡	1,111,753	..	31	12,942,978	..	587,127	..	3,834,858	..	473,481	..	1,150,529		2,107,547	..	16.0	
Atlanta & West Point	133,927*	18	46	1,048,847*	32	34,003*	4T	102,277*	46	Not sep.	..	Not sep.*		138,378*	20	8.5	
Atlanta, Birm. & Coast.	104,022	3T	85	433,059	34	....	..	42,102	15	5,953	—45	8,002		26,117	—69	2.3	
Atlantic Coast Line	1,218,375	170	85	5,119,715	10	126,665	—71	491,321	16	274,290	10	466,907		401,662	—5	5.4	
Central of Georgia	86,765	25	20	1,544,644	20	39,171	—43	204,476	40	50,548	—21	141,751		387,488	4	10.5	
Charleston & W. Carol.	7,813	12	10	269,659	27	1,026	18	24,547	None	3,300	—30	12,555		19,430	—49	3.7	
Clinchfield	11,461	12	8	547,084	46	22,570	—59	83,336	—26	5,929	—13	17,762		79,065	10	8.6	
Columbus & Greenville	3,194	4	13	87,162	9	150	..	..	..	1,638	—63	5,289		1,367	10	4.9	
Florida East Coast	240,204	30	90	975,054	1	23,918	—1	193	..	164,894	—32	36,185		157,596	70	7.6	
Georgia & Florida	36,875	25	85	159,834	48	....	..	..	..	7,958	12	28,952		5,302	110	9.3	
Gulf, Mobile & Ohio	149,378	230	54	1,045,895	25	5,882	—48	251,127	80	80,320	64	98,402		107,582	—73	1.8	
Illinois Central	767,042	60	31	9,025,670	16	86,412	3T	2,389,561	65	384,358	6	536,305		519,936	28	2.8	
Gulf & Ship Island	403	..	1	148,223	..	None	..	None	..	1,786	..	5,131		16,904	..	2.7	
Louisville & Nashville	939,893	82	55	6,271,277	17	21,614	—54	1,344,659	11	243,438	48	874,660		1,943,937	1	16.3	
Mississippi Central	5,678	24	40	51,265*	6	None	..	None	..	7,140	2	None		6,640	—20	13.4	
Nash., Chat. & St. Louis	310,612	46	84	1,359,867	—10	20,936	—49	96,304	—15	36,533	110	104,033		383,088	—5	20.0	
Norfolk Southern	73,702	130	82	333,064	20	....	..	..	..	44,950	90	2,734		22,740	—60	1.5	
Seaboard	738,933	82	53	5,002,188	30	113,253	20	729,520	12	157,343	—24	537,652		327,103	—43	3.2	
Southern	1,108,963	84	38	10,664,015	30	95,913	12	1,361,950	10	283,098	4	851,221		1,439,237	—5	6.1	
Tennessee Central	14,931	20	34	158,244	15	Not sep.	..	45,245	—43	Not sep.	..	25,653		8,017	—4	1.0	
SOUTHERN REGION‡	5,952,171	..	48	44,244,826	..	591,513	..	7,076,548	..	1,756,309	..	3,752,257		5,931,628	..	5.3	
Chicago & Northwest.	479,713	16	30	5,870,036	14	102,318	—29	748,288	—2	439,071	None	822,353		1,635,022	—15	12.0	
Chicago, Great Western	39,954	—20	9	1,564,613	12	18,977	130	161,148	—25	25,742	—28	104,215		63,443	—26	2.0	
Chi., Mil. St. P. & P.	931,577	62	43	7,756,848	14	519,886†	14	2,334,892†	28	Not sep.	..	Not sep.		2,393,958	6	10.1	
Chi., St. P., Minn. & O.	97,872	6	16	2,164,425	—3	17,156	None	85,544	2	105,658	—32	89,213		378,676	—9	10.2	
Duluth, Miss. & I. R.	532,599	72	130	1,486,748	35	68,893	93	261,944	—22	78,216	43	90,443		111,658	—52	4.3	
Duluth, S. S. & A.	126,450	20T	17	272,977	10	2,141	24	98,246	43	9,234	—65	15,034		42,890	10	6.3	
Duluth, Minn. & Pac.	5,695	5T	12	174,517	15	50,298	—38	2,156	—68	21,625	—4	3,627		49,984	42	9.8	
Great Northern	1,657,261	6	80	7,503,794	14	Not sep.	..	992,090	50	514,582	—41	1,084,670		954,879	6	5.4	
Green Bay & Western	7,297	—18	13	209,176	8	1,799	—1	21,837	..	6,860	—14	4,214		22,543	—52	2.1	
Lake Superior & Ish.	98,717	58	28	127,509	9	4,628	—10	562	..	68,711	63	18,678		22,931	—1	9.2	
Minneapolis & St. Louis	30,747	—3	20	557,891	27	1,894	—76	182,124	150	49,252	—74	396,434		208,053	—9	8.2	
Minn. St. P. & S. S. M.	157,934	4	22	2,624,835	13	14,819	50	417,096	1	97,225	—15	231,647		439,901	—1	9.0	
Northern Pacific	346,634	40	25	5,219,171	8	394,938	—54	1,614,327	1	351,555	—25	595,182		1,188,700	—8	9.6	
Spokane International	2,136	—40	16	48,989	1	229	None	....	..	42,313	3T	4,357		5,171	—38	2.0	
Spokane, Port. & Seattle	58,758	—13	26	818,428	28	114,951	10T	527,044	—1	137,937	—25	56,126		119,262	80	3.6	
NORTHWESTERN REGION‡	4,589,865	..	45	36,370,616	..	1,321,862	..	7,514,332	..	1,923,301	..	3,412,091		7,615,799	..	9.0	
Alton	48,518	21	15	1,189,843	8	56,333	17T	155,793	—30	75,828	—1	45,776		100,333	—35	2.5	
A. T. & S. F.	2,988,907	14	63	17,254,372	30	1,078,966†	—50	3,778,858†	—15	Not sep.	..	Not sep.		4,685,139	—4	20.0	
Chi. Burlington & Q.	1,019,079	100	69	5,446,792	11	857,750†	16	2,027,560†	60	Not sep.	..	624,307		2,536,150	—10	10.4	
Chi., R. I. & P.	403,750	16	24	5,992,661	36	421,598	—29	2,608,095	—8	....	..	..		1,299,570	—8	14.6	
Colo. & Southern	128,916	—60	75	626,399	22	1,962	—17	490	—60	25,577	—55	35,034		84,415	46	8.6	
D. & R. G. W.	140,274	80	20	2,540,959	22	11,859	28	500,490	9	161,989	—38	199,168		138,644	—20	9.7	
Ft. W. & D. City	116,919	—9	126	332,531	6	1,286	—35	411	—67	5,347	—18	22,568		58,758	170	8.6	
Nevada Northern	16,783	3T	41	147,820*	38	18,689	2T	14,438*	13T	....	..	Not sep.		30,212	20	10.1	
Northwestern Pacific	40,885	8	60	243,348	—7	25	..	144	..	8,681	—15	57,930		7,799#	—36	12.4	
San Diego & Ariz. E.	1,868	—1	8	84,924	16	345	—35	108	—70	3,147	6	6,845		5,200#	—59	3.3	
Southern Pacific	1,659,302	24	25	21,741,924	30	156,362	—12	2,821,932	13	485,892	2	1,439,435		595,576#	—35	3.6	
Union Pacific	1,596,620	30	33	17,546,351*	24	3,201,292	—20	4,795,031*	129	Not sep.	..	Not sep.		1,723,077	—35	9.0	
Utah	2,155	68	16	49,030	6	29,528	None	267	50	4,231	20	172		42,047	—25	2.5	
Western Pacific	156,300*	10	24	2,333,936*	38	228,099*	38	117,396*	100	Not sep.*	..	Not sep.		225,580	—20	5.8	
CENTRAL WESTERN REGION‡	8,320,276	..	40	75,530,890	..	6,063,983	..	16,820,923	..	770,692	..	2,451,285		11,532,553	..	10.2	
Burl.-R. Island	1,989	—31	13	53,131	—34	341	—10	461	—55	1,083	10	253		10,170	—49	8.9	
Kansas City Southern	249,650	31	90	1,142,843	30	7,564	130	349,745	26	86,141	74	115,490		327,583	32	10.0	
Kansas City Term'l	19,544	75	29	237,509	—12	12,443	2T	38,733	12	4,592	2T	8,558		36,916	—1	8.4	
Louisiana & Arkansas	154,661	30	118	481,212	27	30,417	120	393,224	14	97,251	—10	88,878		132,957	20	6.7	
Missouri & Arkansas	1,300	None	5	90,957	18	....	..	..	..	5,786	80	2,552		2,942	—76	5.4	
Mo.-Kans.-Tex.	182,639	200	31	2,117,332	28	67,036	50T	1,033	8T	88,550	70	155,040		445,927	45	9.6	
Missouri Pacific	1,300,440	82	61	7,850,900*	22	1,124,531	440	1,619,567*	—15	Not sep.	..	Not sep.		1,970,059	62	..	
Gulf Coast Lines♦	293,813	12	100	1,050,181	30	17,154	—69	75,643	—52	19,271	—40	87,938		66,539	—1	2.6	
Intern'l Gt. Nor.♦	374,820	240	114	944,687	30	74,179	15T	119,518	48	28,497	26	55,224		143,504	34	9.0	
St. Louis-San Fran.	651,416	240	55	4,371,547	30	171,883	—8	724,158	13	Not sep.	..	Not sep.		725,147#	—15	9.5	
St. Louis-S. W.	618,993	25	160	1,355,087	38	65,014	—25	717,950	280	278,182	220	69,314		301,508	—5	8.5	
Term'l of St. Louis♦	188,277	14	100	698,705	6	5,994	—10	58,443	32	4,664	56	7,945		18,355	40	4.0	
Texas & New Orleans	670,365	60	70	3,429,357	22	112,299	—5	382,777	110	195,682	30	340,749		594,538	3	6.0	
Texas & Pacific	1,089,853	4	225	1,771,599*	68	291,681	—31	774,326*	46	Not sep.	..	Not sep.		272,071#	None	5.9	
Wichita Falls & Sou.	1,207	..	16	27,739	..	....	..	....	..	247	..	3,619		16,377	..	9.5	
SOUTHWESTERN REGION‡	4,922,513	..	75	22,691,704	..	1,870,766	..	4,963,241	..	752,939	..	775,805		4,800,296	..	11.8	
Grand Total‡	$40,040,027	..	45	$325,368,321	..	$14,988,687*	..	$58,763,143+	..	$8,998,153	..	$19,405,002		$48,425,898	..	9.4	

‡ Totals of Line Haul Roads as Reported ♦ Not included in region totals † New and Relay T Times * Estimated # Cross and Switch

Carried by Class I Railroads in 1941

Stores Stock — Used		Stores Stock — On Hand			Stores Stock — Used		Total—Less Scrap — On Hand			Total—Less Scrap — Used		Scrap — On Hand	Scrap — Sold	Sales Exc. Scrap	Total On Hand	Ratio to Op. Exp.	
1941	Inc. %	Dec. 31	Inc. %	Mo.'s Stock	1941	Inc. %	Dec. 31	Inc. %	Mo.'s Stock	1941	Inc. %	Dec. 31	1941				Road
$76,375	—19	$652,209	—3	10.0	$780,510	22	$940,276	—5	8.0	$1,404,659	6	$14,606	$107,332	.....	$954,882	25.0	B. & Ar.
127,602	50	1,288,409	14	7.4	2,099,162	6	1,915,267	24	4.5	5,073,488	14	14,597	338,042	.....	1,929,864	8.7	B. & A.
675,037	40	2,740,799	32	4.8	6,796,469	24	4,277,549	36	3.8	13,246,384	24	22,226	395,358	$291,448	4,299,775	10.2	B. & M.
65,596#	10	412,212	26	5.4	911,908	6	873,270	44	5.3	1,968,179	12	10,406	54,625	52,388	883,676	15.8	C. Vt.
328,692	26	861,536	33	4.4	2,333,714	18	1,188,478	7	3.2	4,416,804	21	22,566	94,968	32,333	1,211,044	10.9	Me. C.
326,092	—10	5,034,874	42	4.7	13,533,610	20	7,081,737	22	4.0	21,160,156	21	124,242	1,328,139	373,055	7,205,979	9.6	N. Y., N. H.
31,580	8	293,020	68	10.3	334,621	16	513,338	90	6.1	1,015,554	28	5,776	.....	.....	519,114	15.3	Rut.
1,630,974	..	11,283,059	..	5.5	26,789,994	..	16,789,915	..	4.1	48,285,224	..	214,419	2,318,464	749,224	17,004,334	10.6	Region
57,086	4	203,799	28	4.5	533,294	2	286,896	32	2.9	1,157,684	4	1,746	11,198	14,325	288,642	8.1	Ann Arbor
34,701	—13	50,273	49	7.0	87,931	34	56,347	34	3.5	188,859	16	2,644	9,638	.....	58,991	30.0	Camb.
468,936#	22	2,163,809	58	6.5	3,982,284	35	3,110,157	30	4.6	8,002,008	28	106,530	419,556	.....	3,216,687	14.1	D. & H.
316,933	45	2,430,382	100	3.5	5,391,682	28	3,409,292	120	3.6	11,223,648	20	50,943	669,783	344,355	3,455,235	8.0	D. L. & W.
20,358	None	127,264	2	23.0	64,034	—33	181,193	2	12.1	177,260	—5	570	8,417	.....	181,763	28.0	D. & M.
29,968	—6	122,415	53	10.0	145,333	30	169,409	60	5.6	360,587	15	3,811	5,561	6,988	173,220	8.9	D. & T. S.
630,968	8	4,648,441	85	4.6	12,302,336	21	5,811,354	65	3.2	20,926,505	20	234,555	1,820,715	66,970	6,045,909	8.3	Erie
549,441	12	1,692,990	33	5.3	3,775,654	14	2,577,710	39	4.5	6,888,229	12	43,749	448,963	.....	2,621,459	12.2	G. T. W.
25,987	37	98,866	84	6.7	179,132	22	123,382	20	3.9	380,345	13	2,519	11,049	23,473	125,901	9.3	L. & H. R.
30,140	—2	395,906	73	11.9	381,091	25	582,355	50	8.4	830,301	27	13,084	106,096	54,307	595,439	19.0	L. & N. E.
304,942	8	2,012,107	30	4.3	5,178,554	—25	2,805,756	30	3.1	10,878,376	—10	46,872	730,754	38,654	2,852,628	7.4	L. V.
65,428	—5	228,037	30	6.3	329,132	2	242,652	20	4.8	598,076	92	3,436	11,292	.....	246,049	11.0	Monong.
15,624*	—5	161,369	13	9.5	203,344*	8	181,597	20	6.1	350,738*	8	1,437	10,225	.....	183,034	12.8	Montour
4,578,672	34	25,239,388	38	5.5	53,388,396	30	33,532,627	34	4.6	87,457,152	27	465,967	8,546,556	.....	33,998,594	9.6	N. Y. C.
562,109	28	1,914,018	28	4.6	4,961,318	10	2,624,987	17	3.0	10,463,867	9	75,741	593,992	14,786	2,700,728	7.8	N. Plate
18,725	—13	362,670	8	7.5	583,562	30	466,104	12	3.8	1,461,633	20	9,178	113,872	19,787	475,282	8.5	N. Y. Ont.
7,611	..	172,588	..	11.4	181,641	..	230,342	..	5.7	493,645	..	6,764	14,317	2,600	237,106	10.6	N. Y., S. & W
763,134	—7	2,234,293	40	6.3	4,240,425	14	3,389,282	20	4.5	9,012,867	16	138,120	450,585	165,305	3,527,432	12.4	P. M.
42,775	—10	68,085	1	8.9	92,150	—30	89,145	—4	4.8	218,469	—12	2,355	.....	.....	91,500	12.6	P. & S.
39,583*	—66	244,845	3T	9.1	314,625*	92	358,299	220	6.4	668,007	20	Not sep.	52,216	.....	358,299	10.4	P. & W. Va.
39,710	10	89,899	64	11.2	96,168	67	118,908	42	5.6	249,801	50	2,875	6,012	.....	121,783	10.8	P. S. & N.
779,383	2	2,390,371	29	3.9	7,203,801	—5	3,400,986	34	3.3	12,295,999	—1	14,963	158,469	929,440	3,415,949	10.0	Wabash
9,382,214	..	47,051,815	..	5.3	104,146,667	..	63,748,741	..	4.1	184,284,056	..	1,227,859	14,211,301	1,679,990	64,976,600	9.5	Region
78,454	16	135,597	70	5.2	309,554	90	172,420	40	3.4	607,617	68	1,427	17,116	.....	173,847	5.5	A. C. & Y.
2,555,219	22	9,322,707	42	3.1	36,515,389	34	11,297,693	50	2.5	54,315,510	28	167,210	2,273,200	2,706,226	11,464,903	7.1	B. & O. C. H.
5,483	—9	271,447	7	17.8	1,870,566	10	372,514	18	1.7	2,638,470	16	16,562	148,582	.....	389,076	8.8	B. & O. C. T.
104,193	—10	243,454	22	7.5	386,016	20	395 480	10	4.0	1,181,340	10	10,120	97,087	9,057	405,600	10.4	Belt
147,093	..	1,071,695	..	7.2	1,792,217	..	1,275,762	..	5.3	2,800,167	..	12,326	200,300	44,163	1,288,088	12.3	B. & L. E.
296,940	—2	2,085,537	54	4.8	5,275,165	40	2,699,901	64	3.4	9,445,301	26	74,490	536,362	96,765	2,774,391	8.5	C. of N. J.
193,806	None	904,715	74	3.8	2,792,242	16	1,285,723	68	3.5	4,386,458	13	50,863	209,409	107,248	1,336,586	9.7	C. & E. I.
35,973	50	478,512	60	6.7	858,027	—10	558,506	44	5.5	1,222,722	—5	15,032	26,634	12,383	573,538	17.8	C. & L. M.
54,355	1	263,230	20	5.3	592,776	8	351,602	10	4.7	884,352	8	16,267	86,839	.....	367,869	18.0	C. & W. I.
78,467*	—11	487,549	50	5.1	1,142,328*	24	700,873	30	4.5	1,845,370*	18	46,539	27,073	.....	747,412	10.6	C. I. & L.
64,533	—14	494,289	35	9.6	632,058	—12	692,570	31	7.6	1,093,282	—11	1,651	55,494	.....	694,221	15.2	D. T. & I.
301,781	10	1,157,040	50	10.0	1,374,697	—20	1,472,313	28	5.8	2,970,264	4	47,757	397,498	2,155	1,520,070	15.6	E. J. & E.
79,052	4	319,740	6	4.3	884,565	—3	432,143	2	4.6	1,136,149	1	5,661	59,005	20,736	437,804	10.2	Ill. Term.
144,521	—24	2,554,821	100	8.7	3,529,366	—10	3,054,721	105	7.7	4,795,174	—11	18,877	62,400	.....	3,073,598	14.8	Long Is.
4,498,969	32	50,220,001	67	5.0	119,152,359	48	60,513,545	57	4.5	158,467,669	42	969,091	7,444,098	.....	61,482,636	13.2	Penna.
111,696	—14	232,052	65	9.4	295,467	—15	310,469	32	3.9	955,858	2	5,302	10,684	.....	315,771	4.9	P. R. S. S.
422,298	28	4,677,634	33	5.5	10,094,016	69	5,850,680	32	4.3	16,176,715	44	83,440	780,740	212,388	5,934,120	10.6	Read.
262,924	—13	1,207,861	30	3.8	3,733,896	2	1,756,452	21	3.8	5,492,465	4	66,467	426,235	199,498	1,822,919	12.3	West. Md.
315,083	36	1,173,128	35	4.5	3,063,138	21	1,641,626	36	4.3	4,694,814	20	8,718	374,364	56,519	1,650,344	12.1	W. & L. E.
9,586,809	..	76,522,878	..	4.8	191,444,484	..	93,715,397	..	4.1	270,405,535	..	1,574,851	5,383,340	3,458,081	95,290,248	11.8	Region
915,685	50	5,102,656	26	3.7	16,216,562	6	6,615,131	30	3.1	25,592,099	10	174,195	1,910,315	369,568	6,789,326	8.4	C. & O.
351,449*	33	9,228,108	58	7.2	15,425,192*	—6	10,895,775	45	5.8	22,223,757*	1	234,132	No report	.....	11,129,907	15.8	N. & W.
260,273	10	875,011	14	8.1	1,370,097	27	1,247,825	18	5.3	2,859,583	26	33,123	35,304	27,379	1,280,948	15.0	R. F. & P.
149,992	—16	2,226,748	None	7.2	3,656,846	—37	2,953,700	—2	6.3	5,599,022	..	57,812	309,381	47,475	3,011,512	24.0	Va.
1,677,399	..	17,432,523	..	5.7	36,668,697	..	21,712,431	..	4.6	56,274,461	..	499,262	2,255,000	444,422	22,211,693	13.5	Region
196 716*	36	755,875*	20	7.1	1,277,570	19	1,062,183*	20	4.9	2,625,410*	24	18,913*	.....	.....	1,081,096*	12.0	A. & W. P.
130,401	8	239,240	5	2.5	1,173,128*	185	375,332	8	2.7	1,786,692*	100	8,090	2,717	.....	383,422	10.4	A. B. & C.
887,608	13	3,924,810	69	5.1	9,071,915	19	5,945,712	68	4.5	15,947,525	14	81,700	1,204,912	.....	6,027,412	13.2	A. C. L.
418,572	12	1,062,780	50	5.2	2,431,645	16	1,626,752	26	4.1	4,741,018	18	52,588	272,087	363,059	1,679,340	10.4	C. of G.
62,797	—5	287,420	170	7.6	440,053	6	318,989	90	4.6	809,611	10	8,493	31,940	.....	327,482	15.8	C. & W. C.
111,127	10	473,444	36	6.5	869,420	20	592,469	20	4.4	1,628,729	25	19,794	110,314	3,924	612,263	13.2	Clinchfield
33,634	16	129,842	10	10.2	144,615	28	136,191	8	6.1	270,700	18	3,312	29,051	5,255	139,503	12.8	C. & G.
246,918	—11	1,362,304	11	10.3	1,509,005	10	1,948,916	10	8.2	2,767,355	4	49,958	59,902	93,400	1,998,874	23.0	F. E. C.
68,333	18	113,629	46	7.3	186,257	13	163,774	42	4.4	443,376	34	8,906	1,629	.....	172,680	13.8	G. & F.
705,642	13	1,063,270	16	6.7	2,086,732	—39	1,405,432	—1	4.1	4,187,798	—20	5,024	438,091	49,292	1,411,456	10.4	G. M. & O.
2,198,324	4	9,458,985	100	5.4	20,669,876	26	11,210,763	90	3.9	34,819,736	24	645,754	1,599,643	1,959,793	11,862,517	13.2	I. C.
75,507	..	11,116	..	3.1	42,415	..	31,209	..	1.4	271,276	..	865	None	20,555	31,074	23.0	G. & S. I.
1,425,831	12	8,233,523	28	6.5	15,255,424	—8	11,382,375	18	5.4	25,171,851	—1	190,255	1,386,962	.....	11,572,630	14.8	L. & N.
59,073*	..	72,581	46	8.8	99,060*	—22	92,039	34	5.3	209,398*	—30	398	3,849	.....	92,437	11.0	Me. C.
227,234	1	1,952,815	32	10.9	2,147,594*	6	2,703,987	26	8.2	3,935,082*	10	Not sep.	No report	.....	2,703,987	19.2	N. C. & St. L.
181,147	1	483,874	22	13.4	432,596	4T	625,275	25	7.9	949,541	80	5,578	146,696	1,215	630,853	15.2	N. S.
1,237,690	10	4,986,972	54	5.4	10,927,695	34	6,323,604	45	4.1	18,434,755	34	116,082	355,860	272,686	6,439,686	13.3	Seaboard
2,829,751	1	7,588,729	50	5.2	17,490,790	20	10,518,880	38	3.8	33,106,727	21	359,028	2,458,179	No report	10,877,908	10.4	Southern
106,970	46	250,104	18	7.8	381,564	13	273,052	16	4.5	717,679	8	Not sep.	34,621	.....	273,052	12.4	Tenn. Cent.
11,203,275	..	42,450,313	..	5.9	86,547,354	..	56,741,934	..	4.4	152,824,260	..	1,575,738	8,136,453	2,769,179	58,317,672	14.2	Region
1,651,599	5	6,482,335	65	4.7	16,661,166	21	9,138,459	28	4.3	25,789,445	16	243,800	2,756,025	.....	9,382,259	10.7	C. & N. W.
371,331	2	689,215	58	4.3	1,901,936	4	838,296	36	2.4	4,123,243	6	14,400	338,776	5,672	852,696	7.2	C. G. W.
2,814,936	4	11,409,406	88	7.6	17,751,470	10	15,251,827	50	5.9	30,658,146	10	262,209	1,316,321	262,656	15,514,036	16.0	C. M. St. P. & P.
444,039	16	1,040,171	82	5.0	2,477,127	20	1,640,333	30	3.7	5,261,348	6	22,951	186,960	256,712	1,663,284	10.3	C. St. P. M. & O
312,694	68	1,029,736	64	5.5	2,282,319	10	1,821,102	42	4.9	4,434,148	19	32,084	168,533	33,322	1,853,186	14.2	D. M. & I. R.
80,328	18	208,848	58	8.1	295,344	44	389,563	90	6.0	761,899	28	1,982	61,494	9,712	391,545	15.7	D. S. S. & A.
62,235	28	71,344	8	6.2	138,600	20	198,947	—4	6.2	381,135	18	1,410	.....	.....	200,357	15.1	D. W. & P.
2,117,814	13	8,860,028	42	6.8	15,757,608*	22	11,986,750	38	5.3	27,455,886*	24	Not sep.	.....	.....	11,986,750	15.2	Great Nor.
130,068	—12	201,082	24	9.5	251,688	44	239,581	5	4.6	616,983	13	3,694	21,586	1,003	243,275	17.0	G. B. & W.
29,840	1	199,218	—10	16.0	146,775	50	304,205	12	14.6	323,364	16	4,095	30,736	.....	308,210	22.2	L. S. & I.
304,436	—7	699,745	36	7.4	1,125,669	—5	989,711	—5	4.5	2,566,604	20	10,884	388,895	.....	1,090,595	12.1	M. & St. L.
633,230	1	1,994,844	44	6.2	3,707,602	13	2,664,720	27	4.2	7,614,383	11	69,995	318,741	86,256	2,734,715	10.2	Soo
1,487,648	—3	6,398,505	40	5.4	14,047,829	26	8 680,333	33	4.6	2,954,157	13	255,119	1,323,437	.....	8,935,452	15.0	Nor. Pac.
30,533	16	46,688	24	4.9	115,861	24	96,587	55	5.8	199,740	16	4,226	1,752	1,115	103,813	15.7	Spok. Int.
395,734	18	847,946	46	6.8	1,133,322	26	1,278,854	40	4.5	2,930,654	20	23,875	138,311	236,370	1,302,729	15.0	S. P. & S.
10,922,507	..	40,172,841	..	6.5	77,729,754	..	55,623,668	..	5.2	135,949,210	..	936,234	6,712,791	887,143	56,559,902	13.9	Region
483,300	—5	672,224	23	1.7	4,571,895	—10	953,266	18	1.7	6,446,607	—6	13,653	131,606	183,562	966,919	6.5	Alton
2,809,112	7	18,873,770	50	6.5	34,125,059	16	27,626,782	26	5.7	57,967,491	16	143,934	2,637,145	.....	27,770,716	17.6	A. T. & S. F.
2,813,434	21	7,267,906	80	3.9	22,392,755	20	11,680,885	40	4.1	33,304,848	19	331,652	2,168,274	1,127,954	12,012,537	14.4	C. B. & Q.
1,074,977	4	5,353,028	14	4.8	13,185,731	4	7,477,946	7	3.9	22,861,464	4	338,303	1,674,615	1,045,014	7,816,249	10.7	C. R. I. & P.
117,699	3	282,804	87	4.0	854,477	8	523,674	78	3.8	1,634,009	14	26,680	144,759	627,515	550,354	9.2	C. & S.
173,543	—20	2,990,431	38	2.7	12,984,683	150	3,443,197	28	2.5	16,398,843	100	36,989	244,248	.....	3,480,186	14.4	D. & R. G. W.
80,937	—18	403,927	3	5.2	928,688	6	586,237	6	5.1	1,365,135	4	25,819	98,624	44,820	612,056	13.3	Ft. W. & D. C.
35,519*	14	113,529	45	9.0	151,844	—76	179,204	50	6.1	349,621*	52	1,312	.....	.....	180,516	50.0	Nev. Nor.
74,136#	10	54,707	—26	1.6	395,124	2	112,097	20	1.7	770,712	—7	7,319	147,624	.....	119,416	3.8	N. W. P.
18,864#	—26	26,243	18	4.3	71,460	—15	36,803	—3	2.4	182,220	—7	950	7,692	.....	37,753	....	S. D. & A. E.
1,924,068#	10	10,156,501	41	4.1	29,516,640	24	13,053,633	30	2.7	57,474,000	21	345,776	2,797,584	.....	13,399 409	9.2	Sou. Pac.
2,312,217*	56	26,822,232	68	11.0	29,203,914*	20	33,343,221	40	7.3	53,857,513*	26	280,399	1,638,394	.....	33,623,620	21.0	Union Pac.
19,812	66	190,795	10	4.1	55,824	—3	268,756	.1	25.5	125,105	5	1,177	4,795	.....	269,933	35.0	Utah
459,511	—23	1,449,000*	14	7.9	2,219,818*	140	2,058,900*	10	4.8	5,130,661*	57	23,500*	No report	.....	2,082,400	13.0	West. Pac.
12,397,129	..	74,657,097	..	5.9	150,657,912	..	101,344,601	..	4.7	257,868,139	..	1,577,463	11,695,361	3,028,865	102,922,064	15.4	Region
13,625	—30	34,007	—1	5.6	73,305	110	47,587	—10	4.0	149,775	4	340	472	10,254	47,927	4.3	B.-R. I.
370,365	82	1,022,100	80	7.2	1,724,921*	17	1,693,035	60	5.5	3,703,274*	26	51,092	No report	.....	1,744,127	14.1	K. C. S.
52,405	32	205,570	41	4.0	617,265	12	279,065	40	3.5	954,470	7	11,262	26,764	12,541	290,327	10.1	K. C. T.
235,162	32	675,831	25	8.0	999,280	8	1,091,127	22	1.0	2,197,756	6	40,315	250,155	11,473	1,131,442	18.3	La. & Ark.
64,642	22	43,190	23	3.8	137,655	36	53,218	8	2.0	295,806	17	1,062	13,310	None	54,280	4.8	Mo. & Ark.
565,284	20	2,206,080	47	5.6	4,682,132	30	2,901,242	55	4.7	7,520,821	32	13,499	342,446	27,100	3,034,741	10.8	M.-K.-T.
358,619*	—86	9,705,343	44	4.9	23,256,668*	54	14,100,373	54	5.1	33,085,754*	24	Not sep.	.....	.....	14,100,373	14.0	Mo. Pac.
301,654	1	1,165,977	55	7.9	1,784,854	6	1,547,319	35	5.7	3,251,764	8	15,435	21,336	.....	1,562,754	....	Gulf C. L.
185,953	1	1,259,332	60	7.9	1,921,187	4	1,877,332	85	7.0	3,226,569	12	25,163	272,634	None	1,902,495	17.0	Int'l G. N.
927,817#	—5	3,205,898	16	3.8	10,143,351	35	4,754,344	20	3.5	16,166,873	29	62,763	.....	.....	4,817,107	10.2	St. L.-S. F.
427,156	6	1,807,129	33	7.2	2,900,963	2	3,070,826	30	6.8	5,470,470	20	315,406	403,302	.....	3,386,232	9.2	St. L.-S. W.
55,155	—2	433,601	32	4.0	1,280,873	20	650,891	78	2.5	2,101,121	10	12,340	39,298	.....	663,231	9.6	Term'l of St. L.
1,179,612	64	3,123,988	55	4.3	8,609,526	16	4,696,892	42	4.0	13,942,021	29	75,022	486,454	117,976	4,771,914	12.4	Tex. & N. O.
556,014*	4T	3,118,169	28	8.8	4,299,911*	21	4,771,774	12	7.8	7,401,850*	30	Not sep.	No report	.....	4,771,774	22.0	Tex. & Pac.
20,277	56	17,179	—10	4.4	47,249	..	35,010	30	4.2	98,884	..	1,421	3,052	5,190	36,431	9.6	Wich. Falls&Sou
4,718,573	..	24,958,914	..	5.3	56,874,961	..	37,305,428	..	4.9	90,024,284	..	560,920	1,489,191	171,993	37,866,348	9.3	Region
$61,518,880	..	$334,529,440°	..	5.5	$730,859,823°	..	$446,982,115°	..	4.4	$1,195,915,169°	..	$8,166,746♦	$52,171,901♦	$13,188,897	$455,148,861	12.6	U. S.

* $4,188,204 New and $10,988,687 Unclassified + $33,313,999 New and $25,449,144 Unclassified ° Including Scrap not Reported Separately

♦ Not Adjusted to Include Scrap Not Reported Separately

tables, in which the inventory and consumption figures are those reported by the railroads. Changes in inventory and consumption were determined by comparisons with the figures reported the year previous. Turnover figures were computed by dividing the consumption in 1940 by 12 to obtain a theoretical average monthly consumption and by dividing the result into the material balance. Accounting practices are not wholly uniform because of differences in the manner of interpreting accounting rules of the Interstate Commerce Commission. Both inventory and consumption figures are also influenced by differences in the practice of valuing second hand and reclaimed material and there are also differences in the practices of charging material out of stock and in disposing of unserviceable materials which are included in stock balances. Comparisons were facilitated by separating classes of materials which are governed by different policies and conditions or which are controlled by different departments. Uniformity has also been promoted by including ties at treating plants and by specifying that materials reported as "used" should be restricted to the value of materials issued to

Quantities of Selected Material Consumed in 1941 and On Hand Dec. 31

	Fuel Oil		Rail—New		Rail—S. H.		Crossties		Scrap	
	Stocks Dec. 31 bbl.	Used 1941 bbl.	Stocks Dec. 31 G. T.	Laid 1941 G. T.	Stocks Dec. 31 G. T.	Laid 1941 G. T.	Stocks Dec. 31	Laid 1941	Stocks Dec. 31 N. T.	Sold 1941 N. T.
Atlanta, Birm. & Co.	....	....	....	....	296	400	29,080	117,169	908	297
A. C. & Y.	3	31	222	883	103	609	16,667	57,723	92	1,098
Alton	500	36,944	1,329	3,719	5,123	2,979	59,866	371,313	....	....
A. T. & S. F.	....	....	42,312	135,705	....	....	3,982,312	2,215,967	....	....
B. & O. C. T.	730	9,500	560	1,238	940	1,345	16,057	26,288	959	9,581
B. & O.	....	266,174	1,990	33,223	19,176	33,104	805,822	1,727,813	9,137	124,219
Bangor & Aroos.	....	....	628	1,636	1,218	2,686	136,608	124,189	....	....
B. & L. E.	187	3,426	226	4,259	1,499	3,598	9,737	71,045	703	9,609
Bost. & Alb.	618	7,740	162	3,989	4,640	3,474	77,801	79,209	782	10,545
Bost. & Me.	....	2,813	1,390	10,354	7,530	11,614	438,696	429,152	3,175	24,311
Burl.-Rock Isl.	1,257	66,775	7	10	36	7	11,460	13,939	45	62
Cambria & Ind.	....	....	5	308	150	289	1,069	18,937	267	448
Cent. of Ga.	....	....	934	4,877	2,126	5,895	360,163	395,932	....	....
Cent. of N. J.	385	19,261	1,344	4,430	451	4,771	151,466	174,261	6,641	47,804
Cent. Vt.	249	1,760	200	1,002	2,522	1,503	51,486	48,976	845	2,904
C. & O.	896	4,215	166	35,003	9,036	40,704	835,598	683,312	5,774	64,269
C. B. & Q.	....	658,411	....	48,060	24,967	....	....	2,333,266	....	....
C. & E. I.	338	7,973	152	6,175	2,112	4,365	152,200	168,429	1,890	9,685
C. & I. M.	215	1,457	45	1,840	965	1,846	12,651	18,971	619	1,657
C. & N. W.	67,749	754,672	....	18,141	....	27,396	....	1,590,122	....	....
C. G. W.	3,117	54,635	450	3,844	1,223	3,289	48,638	312,668	836	14,730
C. St. P. M. & O.	1,137	31,218	403	2,033	3,864	2,986	367,300	374,332	1,912	15,580
Clinch.	....	....	505	1,864	270	807	111,127	105,141	1,799	10,029
Col. & Sou.	3,008	80,752	42	8	1,023	1,401	83,920	99,995	1,075	6,443
Col. & Green.	343	1,600	4	....	82	289	1,098	30,795	256	1,503
D. L. & W.	200	27,304	231	6,575	5,290	6,335	167,638	219,241	3,280	26,987
D. & R. G. W.	1,413	5,773	281	11,530	6,585	6,894	141,106	196,823	2,575	14,436
Det. & Mack.	236	4,478	....	....	895	868	27,232	32,474	60	530
D. & T. S. L.	7	160	3	204	350	174	2,527	17,157	201	229
D. T. & I.	336	991	377	470	1,292	1,297	102,938	45,469	....	4,084
D. M. & I. R.	870	8,597	1,545	5,883	3,858	4,480	100,639	201,145	1,167	6,737
D. S. S. & A.	....	112	50	2,295	462	747	37,856	107,121	99	3,585
D. W. & P.	....	129	1,083	46	865	145	40,495	69,347	141	395
E. J. & E.	1,269	42,973	1,757	6,018	2,444	3,259	76,587	194,142	2,519	17,870
Erie	4,205	74,442	742	20,961	5,026	17,075	485,666	438,473	12,771	74,237
F. E. C.	197,754	715,444	483	4	6,827	1,540	111,882	214,818	4,638	5,468
Ft. W. & D. C.	173,349	515,067	26	4	290	618	36,718	70,160	737	3,962
Ga. & Fla.	93	518	....	....	228	912	7,324	101,064	599	112
G. T. W.	1,168	51,629	145	2,369	3,115	6,783	123,160	367,375	3,792	27,691
Great Nor.	279,939	4,110,597	....	22,283	....	43,398	....	1,732,757	....	....
G. B. & W.	43	1,672	53	498	276	277	31,755	152,708	147	1,439
G. & S. I.	12	26	....	....	82	....	16,214	....	....	....
G. C. L.	343,393	1,155,133	370	1,633	980	2,641	65,738	1,122,203	1,094	1,443
G. M. & O.	867	23,214	142	5,960	4,072	4,920	195,466	705,753	102	23,057
I. C.	8,594	134,053	2,049	....	16,513	....	459,747	2,160,517	....	87,240
Ill. Term.	....	3,255	698	1,181	381	1,412	65,657	66,475	324	3,102
I. G. N.	461,399	1,158,696	1,616	2,656	1,055	2,209	119,071	172,179	707	13,910
K. C. S.	265,416	849,377	165	7,630	4,576	6,179	....	....	3,967	....
K. C. T.	2,481	54,709	263	814	184	342	26,417	31,404	757	1,547
L. S. & Ish.	38	37	104	13	2,913	751	24,356	47,728	....	2,162
L. & H. R.	....	224	29	640	113	69	3,320	10,966	....	628
L. & N. E.	27	330	216	11	1,447	1,924	20,603	17,515	874	5,394
L. V.	4,373	41,867	1,040	1,765	2,591	7,348	204,722	182,061	2,818	27,932
La. & Ark.	201,663	686,439	691	8,947	4,225	3,844	217,037	235,995	2,344	12,139
L. & N.	92	2,833	542	31,974	10,674	36,875	1,593,740	1,001,369	....	....
Me. Cent.	....	421	278	407	2,663	2,859	96,162	242,763	2,277	6,691
M. & St. L.	2,677	35,278	44	4,286	1,963	14,952	226,522	357,353	658	24,601
M. St. P. & S. S. M.	400	8,000	360	9,862	4,860	11,586	476,929	704,614	....	18,845
Miss. Cent.	....	....	....	....	521	....	6,045	....	....	....
Mo. & Ark.	143	4,654	....	....	525	232	4,971	123,883	39	221
M.-K.-T.	227,392	2,644,167	1,506	23	3,542	6,159	431,884	532,104	886	14,227
N. Y. C. & St. L.	794	6,215	408	7,310	2,278	8,807	336,940	364,441	2,470	24,850
N. Y. O. & W.	....	25	20	23	885	605	8,200	11,630	724	6,326
N. Y. N. H. & H.	11,256	501,100	2,231	16,694	8,037	21,507	....	....	5,568	51,609
N. Y. S. & W.	1,083	3,624	271	455	243	174	6,400	13,649	375	800
N. S.	....	....	....	....	1,694	125	24,754	273,548	375	6,810
N. P.	58,101	281,237	9,025	37,154	17,578	28,198	1,251,284	1,314,594	....	....
P. M.	1,256	8,454	233	6,680	5,820	10,480	521,501	499,600	....	....
P. & S.	9	25	1	....	133	529	9,457	30,775	148	732
P. S. & N.	....	....	373	126	269	343	5,362	39,342	134	200
Reading	2,476	48,150	....	5,454	....	3,499	....	234,610	....	....
R. F. & P.	5,836	36,029	1,165	1,753	1,646	961	170,834	158,794	....	....
Rutland	119	500	442	234	791	342	14,789	22,210	464	1,134
St. L. S. W.	812,202	1,785,804	1,479	16,304	13,915	5,091	356,854	380,522	19,033	17,673
Seaboard	7,000	224,000	2,571	17,256	8,740	19,611	273,615	1,040,579	12,766	53,730
Sou.	10,451	208,946	2,225	32,129	15,158	37,823	885,525	1,858,184	28,431	98,304
S. P. Int'l.	....	....	4	....	1,569	158	9,004	61,362	774	131
S. P. & S.	56,370	938,249	2,202	9,879	6,130	2,464	94,547	304,164	1,990	6,951
Tenn. Cent.	545	1,940	....	1,017	....	1,281	....	105,190	....	2,028
Term. of St. L.	234	1,388	123	1,199	167	284	11,260	33,838	633	2,015
T. & N. O.	816,008	4,406,531	2,452	8,497	7,827	13,630	669,121	843,708	....	....
Utah	....	....	629	4	176	6	20,495	10,084	147	20
Va.	....	....	888	12,811	8,740	5,223	271,728	115,808	....	....
W. Md.	1,260	1,057	698	5,172	1,199	4,465	308,774	164,000	3,021	19,214
W. & L. E.	224	2,807	2,136	5,740	3,360	4,103	142,742	215,204	398	19,870
Wichita	1,794	45,265	....	....	10	145	16,235	20,878	39	266

closed accounts. In practically all cases, the total inventories reported correspond to the totals reported to the Interstate Commerce Commission.

Less Rail on Many Roads

Of 120 railroads reporting detailed inventory and consumption figures, only 6 reported less fuel on hand on January 1 than on January 1, 1941, and all the railroads reported increased fuel consumption. In the case of rail, 50 railroads reported less new rail in stock on January 1, and 47 roads reported less second hand rail in stock, while 40 roads reported reductions in the amount of new rail laid in 1941, as compared with the previous year and 35 railroads reported reductions in relaying of second hand rail. Again, 61 railroads reported fewer ties on hand on January 1 than a year previous and 35 railroads installed fewer ties in 1941 than in 1940. By contrast, practically all the railroads showed substantial increases in their inventories and consumption of maintenance and repair materials.

Based on the average monthly turnover in 1941, fuel stocks on January 1, 1942, represented a 62 days supply in the New England region, as compared with a 39 days supply on January 1, 1941; 36 days in the Great Lakes region, as compared with 22 days one year previous; 40 days in the Central Eastern region, as compared with 18 days previously; 31 days on the Pocahontas railroads, as compared with 16 days previously; 48 days on the Southern roads, as compared with 49 days previously; 45 days in the Northwestern region, as compared with 40 days previously; 68 days in the Central Western region, as compared with 38 days previously and 45 days in the Southwestern region, as compared with 60 days on January 1, 1941.

Crossties on hand January 1 represented a 12.0 months supply on roads in the New England region, 10.4 months stock in the Great Lakes region, 8.3 months in the Central Eastern region, 16.0 months in the Pocahontas region, 5.3 months in the Southern region, 20.0 months in the Northwestern region, 10.0 months in the Central Western region and 11.8 months in the Southwestern region. Stores stocks, on the other hand, represented 5.5 months supply on the roads in the New England region, as compared with 4.6 months on January 1, 1941; 4.8 months in the Central Eastern region, as compared with 4.1 months on January 1, 1941; 5.3 months in the Great Lakes region, as compared with 4.4 months in 1940; 5.7 months in the Pocahontas region, as compared with 4.0 months previously; 5.9 months on the Southern roads, as compared with 4.5 months previously; 6.5 months in the Northwestern region, as compared with 4.7 months; 5.4 months in the Central Western region, as compared with 4.8 months and 5.3 months in the Southwestern region, as compared with 5.0 months previously.

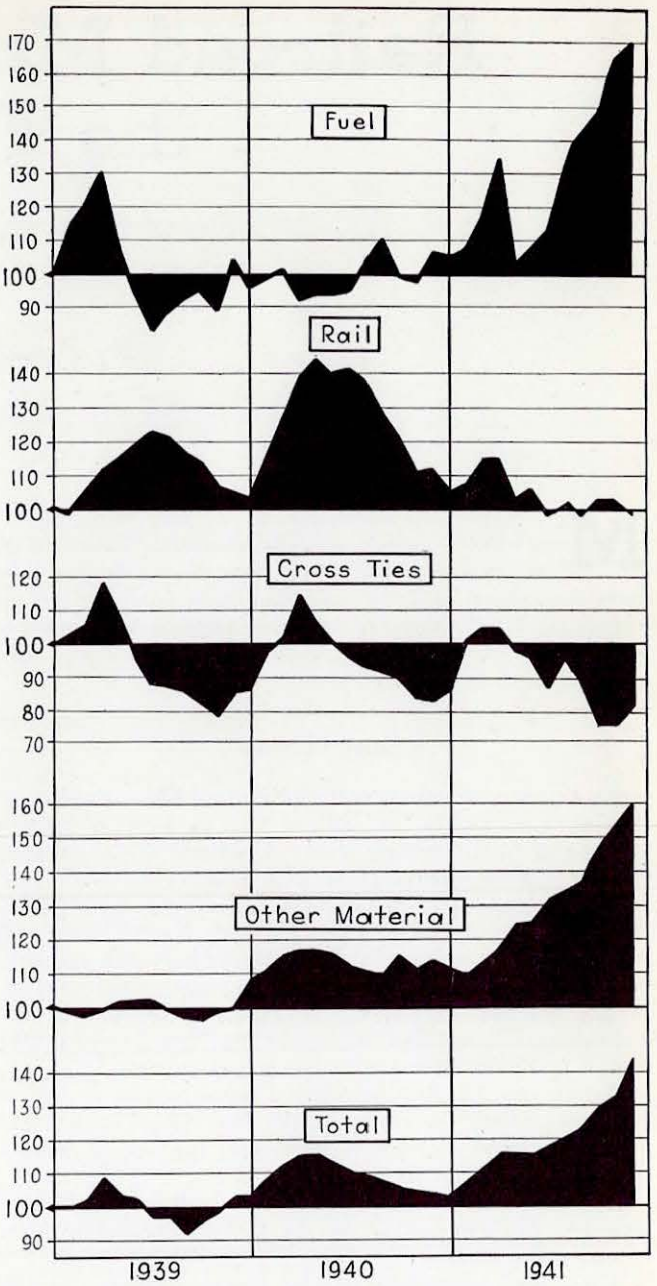
Iron and steel scrap on hand at the close of 1941 was 3.0 per cent of the total inventory and, when compared with sales, represented a turnover of scrap seven times during the year. Aggregate crossties stocks on January 1, including ties at treating plants and unapplied crossties on the line of road, were equivalent to an outlay of approximately $145 per mile of road, while rails on hand, including rails on rests, represented about $80 per mile of road.

Quick Turnover on 45 Roads

There were 45 railroads whose material on hand, exclusive of fuel, rail and crossties, on January 1, represented less than a 5.0 months supply, based on the average monthly consumption in 1941. These stocks, as reported, were equivalent to a 4.8 months supply on the Boston and Maine; 4.4 months supply on the Maine Central; 4.7 months on the New York, New Haven and Hartford; 3.5 months on the Delaware, Lackawanna and Western; 4.6 months on the Erie; 4.3 months on the Lehigh Valley; 3.9 months on the Wabash; 3.1 months on the Baltimore and Ohio; 4.3 months on the Illinois Terminal; 3.8 months on the Western Maryland; 3.1 months on the Chesapeake and Ohio; 2.5 months on the Atlanta, Birmingham and Coast; 1.7 months on the Alton; 3.9 months on the Chicago, Burlington and Quincy; 4.0 months on the Denver and Rio Grande Western; 4.1 months on the Southern Pacific; 4.0 months on the Kansas City Terminal; 3.8 months on the Missouri and Arkansas; 3.8 months on the St. Louis-San Francisco and 4.3 months on the Texas and New Orleans.

By contrast, the inventory of materials, exclusive of

(*Continued on page 704*)



Changes in Aggregate Inventories Month to Month from January, 1939, to January, 1942

Railroad Motive Power of the Future*

An estimate of what can be expected of electric, steam and Diesel-electric locomotives

By Frank B. Powers

Manager Engineering, Transportation & Generator Division,
Westinghouse Electric & Manufacturing Co.

MY purpose is to review briefly the developments of electric, steam and Diesel-electric locomotives, respectively; then to indicate roughly the part each has played and the field each may serve in the future; and, finally, to point out what present developments indicate will be available for the operation of the railroad industry in the near future.

Electrification

As a means of economically providing mass transportation at high speeds, we believe that no form of motive power can equal electrification. From the initial installation of electric operation in this country in 1895, and including the early operations of electric locomotives on the B. & O., New York Central, New Haven and Pennsylvania railroads around the turn of the century, electrification has grown both in this country and abroad. It has reached its highest development to date in the Pennsylvania's installation connecting New York, Washington and Harrisburg.

As we see the place of electrification in the future, it will economically serve essentially two classes of service:

First: Heavy suburban service in the larger centers of population.

Second: Heavy traffic main lines which are so situated that they must be served by the highest obtainable form of rail transportation.

The rapid expansion of the power facilities of the country and the general tendency towards lower price for electrical energy should promote the use of electric traction to a considerable extent. Electricity is the only power or fuel whose price trend is downward.

Suburban Service

In 1941, over 50 per cent of the suburban car miles operated by Class I railroads were powered by electric motive power, principally by what we term multiple-unit cars. For this type of heavy duty suburban service, electrification has absolutely no equal in speed, removal of congestion, comfort, and economy. As the metropolitan centers of population grow and become more congested, the desire of the population is to spread out towards the suburban areas; this should develop rail transportation. There has often been a tendency to belittle this type of service, but we believe it is one which the railroads can well afford to give considerable attention.

Modern developments in the city transit industry have shown that a very fast ride and a very comfortable ride can be produced with extremely rapid accelerating and braking rates, when these rates are properly applied and controlled. Wherever this improved service has been offered, it has been accompanied by a marked increase in traffic and has proved to be profitable.

Work now under way gives promise of producing the same kind of improvements in equipment for main line suburban service. It seems to be "in the wood" to produce a main line car capable of attaining a speed of 75 m. p. h. in less than 60 seconds with smooth acceleration throughout—and to do this so that the car can be operated at a reasonable cost.

In typical main line suburban operation the average distance between stations is approximately 1½ miles. The new type of car I have mentioned, operating with a maximum speed of 75 m. p. h., can maintain a schedule speed of 40 m. p. h. in this frequent stop service due to its ability to get under way rapidly and stop as quickly. No other form of metropolitan transportation, including the private automobile, can approach a 40 m. p. h. schedule for the delivery of passengers.

Heavy Main Line Service

On the Pennsylvania, where heavy main line passenger, freight and suburban operations are included, electrification has not only met every expectation, but has exceeded them. By this electrification of the main arteries of commerce of the congested Eastern seaboard, the railroad has provided this area with a standard of operation which would have been unattainable economically with Diesel or steam motive power. In this operation, fleets of passenger trains, ranging as high as 18 to 20 cars, are operated on unequalled schedules, employing locomotives capable of developing outputs of 8,000 to 9,000 horsepower. Similarly, freight trains up to 12,000 adjusted tons are operated on schedules previously considered excellent for passenger service. These trains often require outputs at the locomotive wheels of 13,000 hp.

While these attainments in motive power sound high, we have an expression in our company which we hear frequently: "We have never yet built a locomotive which the railroads have not been able to overload, and sometimes before it even gets off our drawing board." While this statement borders on the facetious there is really much truth in it, and any examination of the trends in railroad operation clearly show that the demands on locomotives continue to climb upward.

We know that a few years ago freight locomotives which could haul a train at 30 m. p. h. were considered excellent. Today trains are being handled at 50 m. p. h.,

* Abstract of a paper presented before the New York Railroad Club, March 19, 1942.

requiring 5,000 hp. or more merely to keep them rolling at these speeds without considering adverse grades. With further expected improvements in brakes, car trucks, track and allied equipment, it would be folly to think that at 50 m. p. h. the limit to speed had been reached. As speeds go up, the power of the locomotive must go up far faster. The train which requires 5,000 hp. at 50 m. p. h. will require 7,300 hp. to keep it rolling at 60 m. p. h., and 10,500 hp. at 70 m. p. h.

Alternating Current Locomotive

The Westinghouse Company contemplates the future application of locomotives capable of handling this kind of service. Furthermore, we believe that when the railroads undertake to furnish freight transportation of this character and passenger service of a comparable character, electrification will move even further ahead as a source of power for the heaviest traffic lines. With this confidence in the future of electrification, over a year ago the Westinghouse Company undertook the development of apparatus to make an alternating current locomotive to meet these requirements. The specifications for this "locomotive of the future," as laid down at the beginning of this development were as follows:

1. Service—Interchangeable passenger and freight service without change in gearing.
2. Maximum speed—100 m. p. h.
3. Axle loading—50,000 lb. up, so that the locomotive may be applicable to any railroad.
4. Wheel base—suitable for any main line or yard operation.
5. Clearances—size to be same as present locomotives.
6. Continuous hp.—7,500.
7. Maximum hp.—12,000.
8. Cost—considerably below present locomotives per horsepower.

These aims are unquestionably a big step forward from present standards. Our development is still continuing and as yet is not complete. However, we confidently expect to achieve the aims for which we strive.

Throughout the entire electric industry, railway equipment has always been the pioneer in setting the pace for getting more and more capacity into less and less space. This has been accomplished by using speeds and temperature limits far in excess of standards for other types of apparatus. The program set forth above, calling for a 7,500 hp. locomotive, embraces radically new equipment but at the same time is largely within present practical limits of speed and temperature. Certain extremely radical developments are now taking place which may shortly permit the designers to set even new limits to practical speeds and temperatures, in which case even greater strides may be taken in the design of the locomotives.

Simultaneously with this development of the electric locomotive, the developments in other types of locomotives are also rapidly going forward. Interesting and promising as they are, it still does not seem to be possible with the other types of power to approach the performance of an electric locomotive. Therefore, as we see things today, the electric locomotive will continue to be the standard of the transportation industry wherever the ultimate in performance is demanded and the traffic density warrants its use.

Without appearing overly boastful, I believe that we can give the railroad industry one assurance, that however severe you set the conditions, we will be able to provide electric motive power to meet them.

Now, let's look at the steam locomotive. The vast majority of the transportation service of the nation is still handled by the steam locomotive. As new developments take place, the death knell of the steam locomotive is periodically sounded, but the steam engine continues to have more lives than the proverbial cat. In spite of optimists advocating other types of power, the steam locomotive has many features which will continue to give it a prominent part in the railroad set-up.

From the economic standpoint alone, we are yet to see how it can be universally supplanted. A study of the transportation problem shows that the rank-and-file of locomotives, due to the very nature of the traffic problem, annually make relatively few miles, roughly, 55,000 in passenger service and 35,000 in freight service. The steam locomotive, with its low first cost and continually improving operating expense makes an ideal unit for a large percentage of the service to be rendered.

The bulk of the publicity of recent years has probably gone to the electric and the Diesel-electric locomotive, but during this period the designers of steam locomotives have been far from asleep, and the steam locomotive of 1942 is a far cry from the steam locomotive of 20 years ago.

With conventional reciprocating locomotives today, the drawbar horsepower which can be developed at the rail by certain types is roughly as follows:

For three driving axles, about 3,800 hp.
For four driving axles, about 4,500 hp.
For five driving axles, about 5,500 hp.
And for articulated six and eight driving axle locomotives at 6,000 hp.

With capacities of these orders available, supplemented by modern developments in bearings, reciprocating parts, etc., the steam locomotive remains a powerfully efficient instrument for moving high-speed passenger and freight traffic.

Further developments are taking place in reciprocating locomotives. A particularly promising one is the 4-cylinder non-articulated design for high-speed passenger service.

In addition to its advantages in first cost, the steam locomotive also presents an added advantage in its ability to burn the type of fuel particularly advantageous to the locality where it is to be used. This is of importance in wartime where restrictions may exist on any one class of fuel.

However, modern steam locomotives, conforming to existing design standards, seem to be nearing the limit of their capacity. The boilers and fireboxes are about as large as clearance restrictions will permit. Their weight has about reached the limit of wheel loading. More efficient utilization of the steam in the cylinders does not offer major possibilities. As a result, future improvements of a very radical nature seem to dictate radical departures from established practices.

One feature which has been tried a number of times is the high-pressure boiler. For various reasons these have not yet been applied on a large scale and all installations have been of an experimental nature.

Possibilities of Turbine Locomotives

Modern developments in the marine field have succeeded in producing turbines and gearing capable of operating at very high speeds and of a type which offers definite prospects for application to the locomotive field. At the speeds marine turbines are now operating, they can be built for a weight of about 1 lb. per horsepower, or a weight that is comparable to that of an aeroplane engine. Including the gearing, flexible connections to the axle and other auxiliary apparatus, the entire assembly can probably be built for around 5 to 7 lb. per horse-

power. Such weights are far less per unit of capacity than can be obtained by other classes of equipment.

When applied to modern locomotive boilers of around 300 lb. pressure and with superheated steam well within the limits of existing superheater design, the turbine offers theoretically a decided advantage by permitting greater output per pound of steam developed. This permits a higher horsepower from the same boiler and carries with it the attendant advantage of fuel economy. The turbine also eliminates reciprocating parts.

The starting conditions with a turbine are entirely satisfactory for a high-speed passenger locomotive. For any wheel loading and top speed yet demanded, 25 per cent adhesion at starting can be developed. For the lower speed range, say 0 to 25 miles per hour, the turbine is admittedly less efficient than the reciprocating unit but for high-speed service this is not critical.

The Westinghouse Company has been actively studying the application of the direct-geared, non-condensing turbine for several years. These studies indicate that a turbine drive could be applied with considerable advantage to any local arrangement and any size of boiler now developed for steam service. When so applied, the turbine will likely offer an increase in high speed output per pound of steam and per pound of locomotive of about 20 to 25 per cent over reciprocating engines. Its cost per horsepower in the larger sizes should not be far different from reciprocating engines. It will eliminate reciprocating parts and therefore should improve both locomotive and track maintenance. It will burn coal or oil as desired.

Realizing the advantages that may be possible in this kind of locomotive and as a part of its policy to promote all types of motive power for the railroad industry, the Westinghouse Company over a year ago commenced the cooperative development of high-speed, high-capacity turbine locomotives. We confidently expect this development to be a decidedly forward step in the steam locomotive field.

Diesel-Electric Locomotives

The newcomer, so to speak, to the railroad field is the Diesel-electric. From its first application to railroad service about 1925 to the present day, it has continually increased in popularity until today there is some 2,000,000 hp. in service or on order.

Its application has been to switching, main line passenger and main line freight services. The future will continue to see further applications to all of these services.

In heavy switching service, the most popular sizes are the 660-hp., 100-ton locomotives and the 1,000-hp. 125-ton locomotives. Smaller sizes have become popular recently for the smaller railroad yards and industrial switching services. This type of equipment has been standardized to a considerable extent and has definitely proven its economy in rail service. In 1941, the Diesel-electric locomotive performed 12 per cent of the total switching service on Class I railroads.

In high-speed passenger service, the Diesel-electric has continued to go forward. Its early application was on rail cars in very small sizes. Today passenger locomotive units of 2,000 hp. each are used, these same units being coupled in multiple to give 4,000 and 6,000 hp. locomotives where the conditions demand. In 1941, Diesel-electric locomotives in passenger service operated about 30,000,000 miles, or 7 per cent of the main line passenger service of this country. This percentage is small, but the rate of increase is large.

In freight service, two-cab locomotives of 2,700 hp. and of 4,000 hp. are available; and 4-cab locomotives of 5,400 hp. Up to January 1, 1942, a total of 237,000 hp. had been purchased for freight service.

It is difficult as yet to truly evaluate the Diesel-electric locomotive and its ultimate place in the railroad field. Some of its more ardent proponents claim that it will be the cure-all for the railroads. In the early stages of electrification, some enthusiasts made similar claims for it. Unquestionably, it will have a definite place in the motive power field, but it is most unlikely that it will exclude all other types of locomotives.

The future development of the Diesel-electric locomotive is dependent largely upon the engine itself rather than the electric drive. In a 2,000-hp. locomotive of 1940, about 44 per cent of the total weight is engine and drive, or about 60 lb. per hp. The extent to which larger units can be constructed depends upon the ability to increase the speed of the power plant so that more capacity can be placed within the same space and for the same weight.

As the transportation industry has always been in the forefront with developments tending towards concentration of capacity, the same development is taking place in the Diesel-electric field. Developments in which the Westinghouse Company is now participating give every promise of 6,000-hp. Diesel-electric locomotives in one cab in the very near future. This locomotive, incidentally, will also include electric braking.

Future Competition

The airplane will definitely become a more vital factor in future commercial transportation. The aircraft manufacturers are designing passenger planes with capacity for 100 or more persons and are even now designing cargo-carrying planes. On the ground, super-highways are beginning to cover the countryside.

These wartime developments are bound to have their effect on the transportation industry. To meet the competition of the airways and the super-highways, passenger speeds of 100 m. p. h. may be commonplace. Roadbed, alinement, track structure, and curvature must be modified to enable schedule speeds to more nearly approach the maximum speeds. Rolling stock will incorporate hundreds of new materials or new applications of old materials to give a smoother, less expensive ride. Locomotives must be capable of sustaining the required speeds over the entire profile.

In freight service, these developments will mean the operation of certain trains for high-class commodities on schedules approaching the best passenger speeds. Overnight deliveries of 1,000 miles may be commonplace. This freight service will necessitate rolling stock and motive power of the same order as the best passenger service.

Unquestionably the railroads will see new competition in the future. This cannot be avoided. But this war has shown that the nation must have a well integrated transportation industry, in the forefront of which stand the railroads.

Storekeepers Build Up Inventories to War Strength

(*Continued from page 701*)

rail, fuel and crossties, reported on January 1, represented more than a 10 months stock on the Bangor and Aroostook; the Lehigh and New England; the New York, Susquehanna and Western; the Detroit, Toledo and Ironton; the Richmond, Fredericksburg and Potomac; the Florida East Coast; the Nashville, Chatta-

nooga and St. Louis; the Lake Superior and Ishpeming and the Union Pacific.

Total materials in the hands of the railroads as a whole on January 1, 1942, were equivalent to 12.6 per cent of the operating expenses in 1941, although 26 railroads reported inventories representing less than 10 per cent of their annual operating expenses. The ratio of total inventories to annual operating expenses was as low as 7.1 per cent on the Baltimore and Ohio; 8.5 per cent on the Central of New Jersey; 8.4 per cent on the Chesapeake and Ohio; 6.0 per cent on the Chicago Great Western; 6.5 per cent on the Alton and 4.8 on the Missouri and Arkansas. By contrast, the total was 25 per cent on the Bangor and Aroostook; 15.8 per cent on the Central of Vermont; 14.1 per cent on the Delaware and Hudson; 17.8 per cent on the Chicago and Illinois Midland; 13.2 per cent on the Pennsylvania; 15.8 per cent on the Norfolk & Western; 24.0 per cent on the Virginian; 19.2 per cent on the Nashville, Chattanooga and St. Louis; 15.2 per cent on the Great Northern; 16.4 per cent on the Chicago, Milwaukee, St. Paul and Pacific; 17.6 per cent on the Santa Fe and 21.0 per cent on the Union Pacific.

For further comparisons with previous years reference is made to the *Railway Age* of March 29, 1941, April 6, 1940 and April 15, 1939.

Electric Locomotive for Piedmont & Northern

A 1500-VOLT electric freight locomotive, similar in appearance and operating characteristics to one built several years ago in the railway's own shops, has been delivered to the Piedmont & Northern by the General Electric Company. The locomotive is of the eight-axle, four-truck type, classified as B-B + B-B—a wheel arrangement dictated by the desire to duplicate existing traction motor equipment, to maintain individual axle-loading at less than 35,000 lb., and to handle 1,800-ton trailing loads with a single locomotive unit.

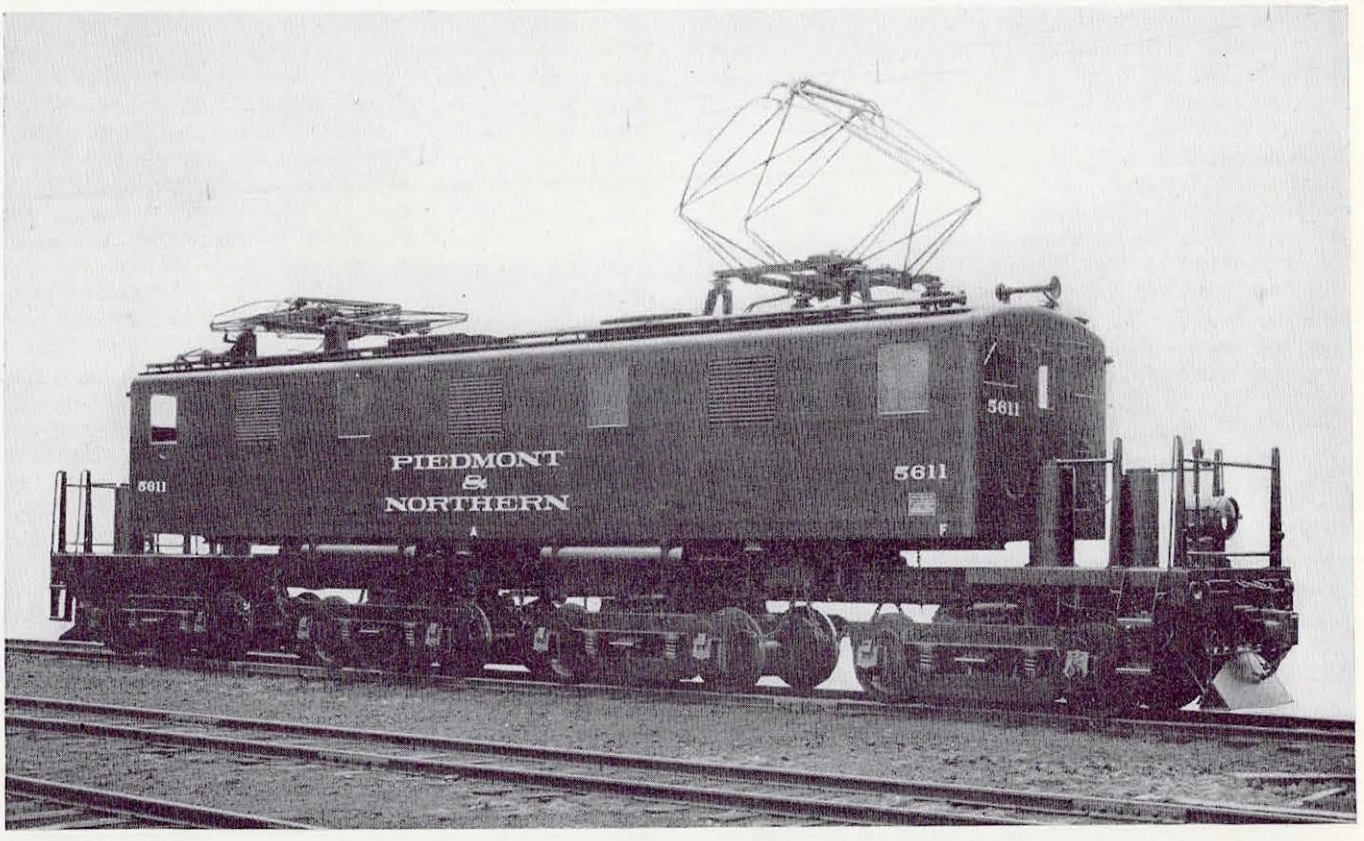
The principal dimensions, weights and characteristics of the new locomotive are, as follows:

Wheel arrangement	B–B+B–B
Length (inside knuckles)	63 ft. 4 in.
Wheel base, Total	52 ft. 6 in.
Wheel base, Rigid	8 ft. 0 in.
Height over collectors, locked-down	16 ft. 2 in.
Diameter of driving wheels	36 in.
Track gage	4 ft. 8½ in.
Total weight (all on drivers)	236,000 lb.
Weight per driving axle	29,500 lb.
Traction motors, number and type	8-GE-212-L
Gear ratio	68/18 = 3.77

Ratings (1500 volts)	One Hour (FS-1)	Continuous (FS-1)
Tractive force, lb.	49,000	34,500
Coeff. of adhesion (per cent)	20.7	14.6
Speed, m.p.h.	18.4	20.5
Horsepower	2,400	1,885

Good Railroading Needed for Perfect Shipping

THE proper performance of duties is essential to perfect shipping and to the prevention of loss and damage to freight, according to C. H. Dietrich, executive vice-chairman of the Freight Claim division of the Association of American Railroads, at a Perfect Shipping Month meeting at Chicago, on March 26. "The major efforts of the railroads to aid in the Perfect Shipping Month Campaign of April," he said, "should be directed toward the training of new employees; more



The Locomotive Is of All-Welded Construction, Including the Cab, Sub-Framing and Trucks—The Sub-Frames Are Articulated

efficient educational work among switchmen and enginemen to bring about careful switching; improvement of the stowing of l. c. l. freight; a more effective system of reporting to the source avoidable and important service irregularities; and stricter supervision to assure compliance with the pamphlets of loading recommendations for carload freight issued by the Operating-Transportation Division of the Association.

"The most effective means for getting this message to the personnel of individual railroads," Mr. Dietrich said, "is through the holding of group meetings at the larger freight stations and the principal terminals and elsewhere, with operating and claim officers in attendance, prepared to explain the vital importance of safeguarding freight of all descriptions. The principal causes responsible for loss and damage should be emphasized, including excessive impacts at time of coupling and failure to stow and brace l. c. l. freight securely."

The Perfect Shipping Month campaign in the Chicago territory was opened with a luncheon of the Traffic Club of Chicago, at which F. A. Schleifer, general chairman of the Mid-West Shippers' Advisory Board, W. D. Beck, district manager of the Car Service Division of the Association of American Railroads, and C. H. Dietrich were the speakers. Mr. Schleifer emphasized the need for reporting the condition of packages at destination so that the shipper will know whether his container and packing methods are adequate to insure against damage to the products. "With the increase in transportation load," he said, "it now becomes necessary, more than ever before, to pack perfectly, mark perfectly, load perfectly, and transport and handle perfectly.

"It is elemental," he continued, "that transportation is of primary and not secondary importance in the war effort and that it cannot be permitted to bog down because the consequences would be disastrous. But, we very definitely are not fulfilling our transportation job or our patriotic duty to the Nation as long as we permit the waste of merchandise to the tune of 23 million dollars annually. For five years we have referred to perfect shipping as the war on waste, but now to paraphrase it, we must consider only the effect of waste on war. On this major premise we are concerned with the conservation of materials, time, labor and transportation. One illustration of this is the arrival of a broken machine at a plant engaged in the production of implements of war and which may prove to be a very serious matter. It is not necessary to project and detail the effect of such an occurrence as it is all too clear. If this should occur frequently and in many places throughout the United States, the total result would be a vital blow to the victory program—a blow struck by and upon ourselves for the full benefit of the enemy."

British Roads Set Up Post-War Plan Group

A POST-WAR "planning commission" for the British railways—not inspired by "progressive" political circles nor by the government authorities which now control Britain's railways—and manned by practical railroad officers—was established in January by the member roads of the Railway Companies Association. Created at the suggestion of Sir Ronald Matthews, chairman of the latter, the new commission is composed of six railroad officers, with Sir Ernest Lemon, vice-president (operating and traffic), London, Midland & Scottish, as chairman. Since Sir Ernest will be relieved temporarily of his duties with his railway, the work of the commission will receive full-time attention.

The field in which the Commission will operate will be without assigned limits, according to reports reaching this country. To all appearances, the British railroads are acutely aware of the menace to their welfare in the difficult era of reduced traffic, increased competition, war-inflated costs and detrimental public works programs, which may not unlikely follow the war. Their planning commission will examine all possibilities in the endeavor to find the answers. All of the tax and subsidy problems to be considered by the Board of Transportation Research in this country will be considered, and the bid for equality made in the British railroads' "Square Deal" program—which was interrupted by the war—will be revived. In addition, all of the possible economies and service improvements *which the railroads themselves can initiate without legislative co-operation* will be thoroughly explored.

Some of the Suggestions Advanced

The variety and extent of possible improvements which invite investigation by the new commission are made evident by the suggestions the British trade press make for its consideration. "Modern Transport," a publication covering all forms of transportation, suggests editorially the following as proper "meat" for the commission: (1) standardization of rolling stock; (2) standardization of construction materials such as pre-cast concrete details; (3) use of light aluminum alloys in rolling stock manufactured in adapted war plants; (4) continuous brakes on all freight cars; (5) automatic couplers; (6) classification yards equipped with retarders and power switches and (7) standard equipment for all trunk line railways and bulk purchase of stores.

The "Railway Gazette" believes that the railroads will have to overcome public prejudice, based thoughtlessly on necessary restrictions of civilian travel during the war, by substantial improvements in operating services and speeds. It also ventures the opinion that the railroads have already learned a great deal about the mass movement of traffic during the war, which experience will prove to be useful to the commission. The "Gazette" asserts also that the commission will probably give consideration to influences not wholly concerned with transportation or the railroads but which will affect the latter greatly—such as "the probable redistribution of industry and the trading and fiscal policy to be pursued by this country." "Modern Transport" also advises the planning commission to "get in an oar" with city planners discussing the rebuilding of cities damaged by air raids.

Sir Ernest Lemon, who has traveled widely and is well known in America, is noted for his planning and installation of mass production methods for the building and maintenance of rolling stock. He also initiated reorganization of the motive power department of the L. M. S., which, at a cost of $10,000,000, brought about far greater economies. In 1938, he went temporarily to the British Air Ministry as Director-General of Production and returned to the railway after laying a ground-work of technique which his successors have followed. Serving with Sir Ernest are K. W. C. Grand, assistant general manager, Great Western, who has been intimately associated with the railroad's subsidiary air transport ventures; F. J. Wymer, assistant (planning) to general manager, Southern; C. K. Bird, assistant divisional general manager, Southern area, London & North Eastern; F. A. Pope, manager, Northern Counties Committee, L. M. S., and T. E. Thomas, general manager, London Passenger Transport Board.

NEWS

Capital Outlay Is Half a Billion

Gross capital expenditures were higher in 1941 than in any year since 1930

Capital expenditures for equipment and other improvements to railway property made by Class I roads in 1941 totaled $543,021,000, the greatest amount spent in any years since 1930, according to the Association of American Railroads. This was an increase of $113,874,000 above such expenditures in 1940. Gross capital expenditures in 1930 amounted to $872,608,000.

Of total capital expenditures made in 1941, $367,568,000 were for locomotives, freight-train cars, passenger-train cars and other equipment and $175,453,000 for roadway and structures. Capital expenditures in 1941 for equipment were $95,662,000 above those in 1940 and expenditures for roadway and structures were $18,212,000 above the preceding year.

Expenditures for freight-train cars in 1941 totaled $245,713,000, compared with $189,629,000 in 1940. For locomotives, Class I roads expended $80,607,000 in 1941. compared with $54,351,000 in 1940. Expenditures for passenger-train cars amounted to $29,544,000 in 1941, compared with $18,417,000 in the preceding year. For other equipment, the railroads in 1941 expended $11,704,000, or an increase of $2,195,000 above the amount spent for that purpose in 1940.

Class I roads in 1941 also spent $36,108,000 for heavier rail, an increase of $5,635,000, compared with such expenditures in 1940. For bridges, trestles and culverts, they made capital expenditures in the past year of $19,419,000, compared with $22,596,000 in 1940. They also expended $13,920,000 in 1941 for additions and betterments to shops and engine houses including machinery and tools, an increase of nearly $3,000,000 above the year before and for signals and interlockers, including telegraph and telephone lines, automatic train control and similar purposes, they spent $13,439,000 in the past year compared with $10,275,000 in 1940. For additional ballast they spent nearly $6,000,000 and $11,000,000 for improvements to station and office buildings and other station facilities. For other improvements to roadway and structures, their capital expenditures amounted to $46,526,000 contrasted with $52,320,000 in the preceding year.

Class I roads in 1941 put 80,502 new freight cars and 633 new locomotives in service. On January 1, 1942, there were 74,897 new freight cars and 546 new locomotives on order. Purchase of this equipment was for the most part authorized in 1941, but construction and delivery could not be completed within that year. Reports just received from the Class I roads show that the carry over into 1942 from the preceding year of all unexpended authorizations amounted to $372,771,000 of which $256,356,000 was for cars and locomotives and $116,415,000 for roadway and structures.

Railway Co-ordinator in WPB's Industrial Salvage Section

B. C. Bertram, formerly with the Lehigh Valley, has become railway coordinator in the Industrial Salvage Section of the War Production Board's Bureau of Industrial Conservation. Mr. Bertram's assignment is to get out all dormant railroad scrap.

New Associate Director of ODT Coastwise and Intercoastal Division

Neil S. Laidlaw, Pacific Coast traffic manager for the Calmar Steamship Corporation, has been appointed associate director of the Office of Defense Transportation's Division of Coastwise and Intercoastal Transport.

President Signs War Powers Act

President Roosevelt has signed the Second War Powers Act, 1942, which gives the Interstate Commerce Commission emergency powers over motor carriers similar to those which it has over railroads. As noted in the *Railway Age* of March 28, page 668, Congressional action on the measure was completed on March 19.

ODT Advisory Committee

Formation of a New York State Waterway Operators Advisory Committee has been announced by Director Eastman of the Office of Defense Transportation. The committee will cooperate with Edward Clemens, director of ODT's Division of Inland Waterways, in dealing with problems affecting the New York State Barge Canal.

Crediting Military Service Under Retirement Act

The Senate on March 30 passed H. R. 6387, thus completing Congressional action on this bill introduced by Representative Crosser, Democrat of Ohio, to extend the crediting of military service under the Railroad Retirement Act. The bill would provide for the crediting of military service subsequent to 1936, service in a war period prior to January 1, 1937, being already creditable.

Where Will the Wheat Crop Go?

Elevators are practically full now and the federal experts offer no suggestions

The elevators of the country are full of government loan wheat to the extent that only a small portion of the 1942 crop can move, according to facts brought out at a special grain meeting held in Kansas City, Mo., on March 25, in conjunction with the 20th annual meeting of the Trans-Missouri-Kansas shippers board. Moreover, little hope was expressed by any of the speakers that any relief from the unprecedented storage situation would be forthcoming between now and the time the winter wheat is harvested.

Frank A. Theis, president, Simond-Shields-Theis Grain Company, reported that the winter wheat crop in the Southwest was planted under the most favorable conditions in ten years, and that the wheat is now in as fine condition as has ever been known. His report covered Kansas, Missouri, Nebraska, New Mexico, Colorado, Oklahoma and Texas. While the acreage planted in these states last fall amounted to only 24,322,000 acres, as compared to 28,891,000 acres during the previous season, the yield per acre this year is estimated at 14.5 bushels, as compared with 13.7 last year, and the total production is estimated at 351,552,000 bushels, as compared with 325,412,000 bushels last year.

The highest previous carry-over of old wheat up to last year, Mr. Theis said, was in 1931, when 315 million bushels were in storage. Last year, 385 million bushels were in storage when harvesting began, and this year, an estimated 630 million bushels will be jamming the elevators when the harvest begins. Referring specifically to the Kansas City area, one of the world's greatest wheat storage centers, Mr. Theis pointed out that, with 61½ million bushels storage capacity, 17½ million bushels capacity was vacant on March 21, 1941, an unusually low figure. In contrast, on March 31 this year, only 7 million bushels capacity is vacant, thus creating the most unusual and serious storage situation ever known. Further, according to Mr. Theis, surveys indicate that the Kansas City situation is repeated at all elevators throughout the country, and the most reliable estimates are that exports will be far below last year.

W. B. Lathrop, regional director of the Commodity Credit Corporation, which controls approximately 90 per cent of the

(*Continued on page 714*)

465,000 Daily Bbl. of Rail Oil

So Ickes announces, who last Fall hotly denied rrs. could move half as much

Daily tank car movements of petroleum and petroleum products to the east coast reached a new high of 464,561 barrels during the week ended March 21, according to an announcement by Petroleum Coordinator Harold L. Ickes. This is the third consecutive week that a new high has been established. The previous record of 439,200 barrels per day was established in the week ended March 14.

In moving 464,561 barrels each day into the east, the 16 reporting companies loaded a total of 14,453 cars, Mr. Ickes pointed out. On the basis of an average of 225 barrels per car, this is equivalent to 3,251,925 barrels of petroleum and petroleum products. During the previous week, 13,664 cars were loaded, or the equivalent of 3,074,400 barrels.

Meanwhile, higher transportation costs involved in using railroad tank cars instead of ocean tankers to maintain adequate supplies of petroleum products along the eastern seaboard have been recognized by Acting Price Administrator John E. Hamm in an order raising maximum prices for gasoline and fuel oil in 17 eastern and southern states and the District of Columbia.

The order is effective immediately and raises maximum prices by the following amounts: Gasoline, one-half cent per gallon; Distillate fuel oils, 0.4 cent per gallon; and residual fuel oils, 20 cents per barrel. The order will increase the price of petroleum products in Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida and the District of Columbia.

In asking for the increase in prices, the oil companies estimated that their current additional costs due to the use of tank cars instead of ocean tankers were running at the rate of more than $100,000,000 a year and were rising rapidly.

P. R. R. Engine Crew Drives in for Repairs at "Service Station"

The engine crew of a westbound passenger train on the Pennsylvania between Pittsburgh, Pa., and Chicago recently stopped for repairs at a factory along the line, thereby cutting what might have been a long delay to a minimum, and preventing a partial tie-up of traffic on an extremely busy piece of railroad. Engineman John Lorne and Fireman H. H. McMurray, at the head end of Train No. 113, felt the air brakes apply automatically about three miles west of Beaver Falls, Pa. They found that the pipe feeding steam to the air compressor on the locomotive was disconnected, causing the compressor to be inoperative.

It was impossible to move the train unless the pipe was replaced. A quick examination showed that if a new thread were cut on the pipe it could be recoupled with ease. Across the tracks a sign proclaimed that the Babcock & Wilcox Company manufactured steam boilers on the premises. Surely the best place in the world to find a pipe-fitting tool. Accordingly the engineman disconnecting the pipe, took it over to B. & W., selected pipe stock and die of the right size and with the assistance of a plant employee, cut a new thread thereon. Returning to the locomotive he and the fireman together replaced the pipe and made the proper coupling. The brakes were promptly released and Train No. 113 proceeded on its way—after a detention of only 35 min.

Voelkner Assistant Federal Manager of T. P. & W.

John W. Barriger, federal manager of the Toledo, Peoria & Western, on March 26 designated George Voelkner, former general manager of the Lehigh Valley at Bethlehem, Pa., to be assistant federal manager. Mr. Voelkner entered railroad service in June, 1908, in the mechanical department of the Chicago & Western Indiana, later becoming supervisor of telegraph and telephones for that road and the Belt Railway of Chicago. After serving as superintendent of the C. & W. I., he went with the Lehigh Valley in January, 1940, serving successively as assistant to general manager, general superintendent, assistant general manager and general manager, resigning from the latter position last January.

Midwest Board Meeting

The ability of the railroads to meet the transportation demands which may arise from the war program, as well as the ordinary demands of commerce, will be discussed at the annual meeting of the Mid-West Shippers Advisory Board at the Palmer House, Chicago, on April 7. At a luncheon sponsored by the Public Affairs Committee of the Traffic Club of Chicago, Interstate Commerce Commissioner Johnson will speak on Vigilance.

Status of Municipal Belt of Tacoma

The Interstate Commerce Commission, Division 3, has found that the Municipal Belt Line Railway of Tacoma, Wash., is "more than a street, interurban or suburban electric railway," and thus it is not within the terms of the exemption provisos of section 1(a) of the Railroad Retirement Act, the Railroad Unemployment Insurance Act and its Carriers Taxing Act.

T. & P. Gets Trucking Certificate

Subject to the usual conditions designed to insure that the highway service will remain supplemental to rail service, the Interstate Commerce Commission, Division 5, has granted the Texas & Pacific Motor Transoprt Company, affiliate of the Texas & Pacific, a certificate authorizing common-carrier trucking operations on 214-mile route between Pecos, Texas, and El Paso. The route will extend T. & P. highway operations to the Western terminus of its rail line.

RR Investment Now Pays 3.85%

That is the percentage carriers earned in twelve months ended in February

Class I railroads in the first two months of this year had an estimated net income, after interest and rentals, of $49,700,000, as compared with $34,700,000 in the corresponding period last year, according to the Bureau of Railway Economics of the Association of American Railroads. The two-months net railway operating income, before interest and rentals, was $135,450,263, as compared with $120,156,258 for January and February, 1941. The rate or return for the 12 months ended February 28 averaged 3.85 per cent, compared with 2.75 per cent for the 12 months ended February 28, 1941.

February's estimated net income was $23,800,000, compared with $15,000,000 in February, 1941, while net railway operating income for that month was $66,486,021, compared with $58,135,957 in February, 1941.

Total operating revenues in the two months totaled $943,177,171, compared with $735,787,689 in the same period in 1941, or an increase of 28.2 per cent. Operating expenses amounted to $676,434,315, compared with $524,559,078, an increase of 29 per cent.

Class I roads in the two months paid $107,901,279 in taxes, compared with $70,524,898 in the same period in 1941. For February alone, the tax bill amounted to $56,736,208 an increase of $22,067,484 or 63.7 per cent above February, 1941. Thirty-six Class I roads failed to earn interest and rentals in the two months of 1942, of which 14 were in the Eastern district, three in the Southern district, and 19 in the Western district.

Operating revenues for February totaled $462,486,015 compared with $358,413,499 in February, 1941, while operating expenses totaled $327,653,379 compared with $255,590,196 in the same month in 1941.

Class I roads in the Eastern district in the two months had an estimated net income, of $19,400,000 compared with $31,500,000 in the same period last year. Those same roads had a net railway operating income, of $54,215,766, compared with $67,017,171, in the same period in 1941.

Gross in the Eastern district in the two months totaled $452,550,095, an increase of 20.2 per cent compared with the same period in 1941, while operating expenses totaled $333,734,821 an increase of 27.2 per cent above 1941.

In the Eastern district for February alone the estimated net income was $8,300,000 compared with $14,700,000 in February, 1941. Net railway operating income amounted to $25,682,729 compared with $32,531,821 in February, 1941.

Class I roads in the Southern district in the two months had an estimated net income of $12,200,000 compared with $10,300,000, in the same period last year. Those same roads had a net railway operating income of $22,743,509 compared with $20,893,-

(Continued on page 715)

1941 Purchases of Class I Roads

Total nears 1.2 billions and exceeds 1940 total by 307 millions

Purchase of fuel, materials and supplies made by the Class I railroads of the United States in connection with their operation were greater in 1941 than in any year since 1929, according to J. J. Pelley, President of the Association of American Railroads. Such purchases in 1941 totaled $1,161,274,000, an increase of $306,811,000 compared with 1940. In 1929 purchases of fuel, materials and supplies totaled $1,329,535,000.

Class I roads in 1941 expended $349,765,000 for fuel compared with $273,556,000 in 1940. For bituminous coal only, their purchases totaled $259,328,000, an increase of $53,700,000 compared with the preceding year, while for anthracite, they totaled $4,053,000 an increase of $567,000 compared with 1940. Purchases of fuel oil in 1941 amounted to $77,517,000 compared with $56,895,000 in the preceding year. For gasoline, there was an expenditure of $5,025,000 in the past year, while for all other fuels, including coke, wood, and fuel for illumination, expenditures amounted to $3,842,000.

Purchases of forest products amounted to $103,771,000 in 1941 compared with $82,185,000 in 1940. For cross ties, including switch and bridge ties, the railroads expended $56,058,000 in 1941, an increase of $3,524,000 above such expenditures in 1940. Purchases of lumber, including timber as well as other forest products, amounted to $47,713,000, which was an increase of $18,062,000 above the preceding year.

Class I roads, in 1941 purchased iron and steel products amounting to $456,147,000 compared with $315,048,000 in 1940 or an increase of $141,099,000. For locomotive and car castings, beams, couplers, frames and car roofs, the railroads spent $67,501,000 in 1941 compared with $40,852,000 in the preceding year. Purchases of steel rail, including new and second-hand except scrap, amounted to $52,234,000 in 1941 compared with $45,065,000 in the preceding year, while for track fastenings, track bolts, spikes, and other such materials used in connection with the laying of rails, the railroads expended $51,740,000, which was an increase of $16,022,000 above the preceding year.

For wheels, axles and tires, the railroads expended $36,913,000 compared with $27,390,000 in the preceding year, and for bar iron and steel, spring steel, tool steel, unfabricated rolled shapes, wire netting and chain, boiler, firebox, tank and sheet iron and steel of all kinds their expenditures amounted to $49,491,000 compared with $25,875,000 in the preceding year. Purchases of interlocking and signal material in 1941 totaled $21,199,000, and for standard and special mechanical appliances for locomotives, $19,160,000.

Miscellaneous purchases made by the Class I roads totaled $251,591,000 in 1941, compared with $183,674,000 in 1940. Coming under this heading were $37,172,000 for glass, drugs, chemicals, including chemicals for timber treatment, and painters' supplies; $22,101,000 for lubricating oils and grease, illuminating oils, boiler compound and waste; $17,616,000 for stationery and printing; $22,918,000 for commissary supplies for dining cars, camps and restaurants; $20,268,000 for electrical materials; $13,179,000 for ballast; $9,551,000 for passenger car trimmings; and $14,155,000 for locomotive, train and station supplies.

Pendulum Cars on Test Run

The Great Northern on April 1 operated a test run of the three pendulum cars built for that road, the Santa Fe, and Burlington, respectively, on a round-trip between St. Paul and Duluth, with a special party of 100 railway executives and prominent Twin Cities shippers. The purpose of the operation was to demonstrate the riding characteristics of these cars, in comparison with standard coaches, at speeds ranging up to 85 miles per hour. Similar test runs at an early date are planned by the other two interested railroads.

Railroad Bridges Set Afire

Two bridges on the Southern Pacific, 30 miles northeast of El Centro, Cal., were set afire and damaged on March 29. The two fires were sighted by the crew of the "Argonaut," and the train, bearing about 150 passengers, was halted. The bridges were about 900 ft. apart. Oil, according to reports, was used to set the wood trestles afire.

The Northern Pacific and the Chicago, Milwaukee, St. Paul & Pacific are investigating the possibility of sabotage in connection with a fire on a trestle at Ellensburg, Wash., on March 26. The damage is estimated at $10,000.

Bill Would Provide Tolls on Inland Waterways

Representative Snyder, Democrat of Pennsylvania, has introduced H.R. 6886 "to provide for tolls with respect to the use, for commercial navigation, of the improved waterways of the United States, for the purpose of reimbursing the United States for expenditures made in improving such waterways."

The tolls would be fixed by an Inland Waterways Revenue Board which would administer the act. Members of the Board would be the Secretary of War, the Secretary of the Treasury, and the Chairman of the Interstate Commerce Commission.

U. S. Chamber Annual Meeting

Transportation subjects will as usual come in for consideration at that annual meeting of the Chamber of Commerce of the United States which will be in session at the Stevens Hotel, Chicago, from April 27-30. The detailed program has not been published, but the general outline of the meeting shows transportation listed among sub-topics embodied in the opening day's general theme: "War Work of Business Organizations—What They Are Doing to Help Win." Also, "Transportation Problems of the Emergency" will be discussed at one of April 29's group-luncheon sessions.

Army Traffic Dept. Adds to Its Staff

Metzman of N.Y.C. and Williamson of Sears included in expanded organization

More effective control of the routing and flow of government traffic moving to the ports for transshipment overseas is expected to result from a reorganization of the War Department's transportation set-up which was announced last week. Coordination of cargoes with available ships is the objective of the reorganization which involves the creation of the Liaison Committee of Overseas Shipping, and the expansion of the present traffic office into a Traffic Control office.

The latter is headed by W. J. Williamson, who is on leave from his position as general traffic manager for Sears, Roebuck & Company. Under Mr. Williamson is a rail transportation unit, headed by G. Metzman, New York Central assistant vice-president; a water transportation unit, headed by J. M. Franklin, former president of the United States Lines; and a motor and air transportation unit, headed by F. C. Horner, former assistant to the chairman of General Motors Corporation. Also, Leo J. Coughlin, former vice-president of Tidewater Terminals & Inland Warehouses, will have charge of in-transit storage depots; while Lieutenant Colonel E. C. R. Lasher will be Mr. Williamson's assistant. It is understood that Mr. Williamson, and perhaps some of his associates, will be commissioned as army officers; although Mr. Metzman is expected to retain his civilian status.

Acting in an advisory capacity while plans for the new set-up were being prepared were C. E. Denney, president of the Northern Pacific, and W. S. Guy, traffic manager of the United States Steel Corporation. Mr. Guy continues to serve as consultant on general traffic problems, while Mr. Denney will be general adviser on railway matters.

The Liaison Committee of Overseas Shipping will be a four-man board consisting of representatives of the War Department, the Office of Defense Transportation, the War Shipping Administration, and the British Ministry of War Transport. It will serve as a planning board and as an advisory group to Brigadier General C. P. Gross and Brigadier General T. H. Dillon, respectively, chief and deputy chief of transportation in the Army's Service of Supply. Mr. Williamson's Traffic Control office comes under Brigadier General Gross.

Explaining the function of his office, Mr. Williamson said that eventually it will have jurisdiction over all government shipments to the ports; and no cargo will be moved to a port without a clearance from Traffic Control. Traffic Control's branch chiefs and their activities, he explained, are all complementary to each other. Colonel Franklin as head of the water transportation unit has jurisdiction over all matters pertaining to the handling of freight at the

seaboard, i. e., ships, stevedoring, warehousing, etc. He will cooperate with the War Shipping Administration, allocating to ports where WSA has boats available a sufficient amount of cargo to permit prompt and efficient loading.

Mr. Metzman's job is one of seeing that rail facilities for moving cargoes to the proper ports are open and available, while Mr. Horner has a like assignment with respect to highway and air transport facilities. With respect to the rail-service requirements, the plan contemplates that Traffic Control will work closely with A. H. Gass, manager of the Car Service Division's Military Transportation Section. Mr. Coughlin, as indicated above, will arrange for any in-transit storage which may be required; Traffic Control will not handle the Army's dead storage arrangements —generally its authority over shipments runs from the time they leave dead storage until they are aboard vessels.

Money for Rivers and Harbors

The Senate last week passed H.R. 6736, the War Department Civil Functions Appropriations Bill, which carries appropriations for rivers and harbors work during the fiscal year ending June 30, 1943. The rivers and harbors total in the Senate version is $66,802,500, the upper body having added to the House's $52,502,500, an item of $9,300,000 for the construction of the new lock on the St. Marys river at Sault Ste. Marie, Mich. The bill is now in conference where differences between the House and Senate versions will be ironed out.

T. P. & W. Back to Normal

Traffic on the Toledo, Peoria & Western is about back to normal, according to John W. Barriger, federal manager. President Roosevelt, on March 21, ordered the Office of Defense Transportation to take over the railroad and on the following day, representatives of Director Eastman began arrangements to take over the railway. The road will be operated for as brief a time as possible by the Director of Defense Transportation and the federal manager "in such manner as may be necessary for the successful prosecution of the war, through or with the aid of such public or private agencies, persons or corporations as may be designated."

When the government took over the railroad, striking employees were ordered to return to work as of 12:01 a.m. on March 25, with the exception of those who engaged in alleged or proven unlawful conduct or similar activity since the strike started. Conferences were held between the brotherhoods and Mr. Barriger to determine the "exceptions" and the list finally narrowed down to five who will not be reinstated. Among the 55 members of the Brotherhood of Railroad Trainmen who went out on strike, 50 will probably be reinstated. Of the five, one went into military service, two others went back to work after a month and two others are regarded as exceptions under the federal manager's order. Of the 45 members of the Brotherhood and Railroad Firemen & Enginemen, who were called out on strike, about 40 will be reinstated. Of these five, two remained at work, another applied for a pension, another was reinstated on another railroad, and the fifth left Peoria.

The men returned to work under conditions which existed before the strike was called on December 28, 1941. The Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Railroad Trainmen have served formal notices on the federal manager of a demand for standard working rules and the rates of pay contained in the Emergency Board agreement last fall. Up to the present time the War Labor Board has not announced whether new contracts with the Brotherhoods will be negotiated.

Brandt Becomes Associate Director of ODT Rail Transport Division

Harry G. Brandt, general manager of the Santa Fe Trail Transportation Company, affiliate of the Atchison, Topeka & Santa Fe, has been appointed an associate director of the Office of Defense Transportation's Division of Railway Transport which is headed by V. V. Boatner. Maintaining headquarters at Chicago, Mr. Brandt will be "in charge of rail-truck coordination in the Western region;" he will work "in cooperation with staff members of the Division of Motor Transport."

Harry G. Brandt

The same announcement revealed that W. C. Kirby, supervisor of yards and terminals for the Seaboard Air Line, at Norfolk, Va., has been appointed terminal assistant to J. M. Hood, the Division of Railway Transport's associate director in charge of the Southern region. Also, the appointment of O. C. Castle as assistant director of the Division (see *Railway Age* of March 28, page 669) was officially announced, the announcement stating that Mr. Castle will be in charge of freight service—maintaining "a close check on railroad freight operations with a view to improving efficiency through heavier loading of cars, pooling of equipment, and other expedients."

Associate Director Brandt was born at Wichita, Kan., on December 4, 1886, and he entered railroad service in November, 1906, as a stenographer to the Santa Fe trainmaster at Dodge City, Kan. Thereafter he served until March, 1911, as secretary to the superintendent, to the general superintendent, and to the assistant general manager. After next serving for a year in clerical positions in the general superintendent's office, Mr. Brandt, in October, 1912, became chief clerk to the assistant general manager at Amarillo, Texas. He remained in that position until July, 1926, when he became trainmaster; and he served in that capacity until he became assistant general manager of the Santa Fe's Department of Highway Motor Transport on July 1, 1936. In January 1, 1939, Mr. Brandt was appointed general manager of the Santa Fe Trail Transportation Company, the position he was holding at the time of his present appointment to the ODT staff.

Chicago Traffic Club Elects Officers

At the annual meeting of the Traffic Club of Chicago, on March 26, the following officers were elected for the ensuing year: President, A. H. Schwietert, traffic director of the Chicago Association of Commerce; first vice-president, E. B. Fingan, chief traffic officer of the Chicago, Milwaukee, St. Paul & Pacific; second vice-president, S. L. Felton, general traffic manager of the Acme Steel Company; third vice-president, J. H. Burke, vice-president and general manager of Chicago Tunnel Transportation Company; secretary, George H. Weiss, shipping editor of the Chicago Journal of Commerce; and treasurer, R. J. Wallace, traffic manager of the Jaques Manufacturing Company.

I. C. C. Would Suspend Minimum Motor Rate Orders

Parties to four general proceedings wherein the Interstate Commerce Commission has prescribed minimum motor carrier rates have been ordered by the commission to show cause in writing on or before April 27 why the effectiveness of the minimum-rate orders should not be suspended. The proceedings are Ex Parte No. MC-20, Trunk Line Territory Motor Carrier Rates; Ex Parte No. MC-21, Central Territory Motor Carrier Rates; Ex Parte No. MC-22, New England Motor Carrier Rates; and Ex Parte No. MC-23, Midwest Motor Carrier Rates.

The identical orders in all four cases note that there has been "a substantial accomplishment" of the minimum-rate orders' purpose, i. e., the halting of "destructive rate cutting." Thus, the orders added, the motor carriers involved "should be permitted to propose necessary changes in their rates without waiting for a modification of the minimum rate order upon petition."

Separate Bill for Florida Canal

Senator Pepper, Democrat of Florida, has introduced S.2426 which would authorize the President to construct the Florida Ship Canal and "temporary pipe-line facilities" across Florida. Discussing the measure in the Senate on March 31, Mr. Pepper asserted that, pending completion of the canal, the pipe-line facilities would connect the Gulf of Mexico and Atlantic intracoastal

waterways and provide facilities for the transportation of petroleum products to the Eastern-seaboard area.

The Senator recalled that the Florida canal would be authorized by the pending billion-dollar rivers and harbors bill; but he added that the latter "seems to be making not too speedy headway in the House."

Freight Car Loadings

Loadings of revenue freight for the week ended March 28 totaled 804,746 cars, the Association of American Railroads announced on April 2. This was an increase of 8,106 cars or one per cent above the preceding week, an increase of 10,943 cars or 1.4 per cent above the corresponding week last year, and an increase of 175,825 cars or 28 per cent above the comparable 1940 week.

As reported in last week's issue, loadings of revenue freight for the week ended March 21 totaled 796,640 cars, and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For Week Ended Saturday, March 21, 1942

District	1942	1941	1939
Eastern	165,814	174,468	137,026
Allegheny	181,780	174,266	125,580
Pocahontas	54,021	54,699	44,799
Southern	127,361	120,105	99,965
Northwestern ..	88,017	85,499	71,987
Central Western	115,250	109,744	96,151
Southwestern ..	64,397	51,203	44,867
Total Western Districts	267,664	246,446	213,005
Total All Roads	796,640	769,984	620,375
Commodities			
Grain and grain products	35,608	36,913	31,441
Live stock	10,445	10,817	10,797
Coal	152,907	167,512	118,764
Coke	14,074	14,061	8,540
Forest products.	47,469	38,886	33,346
Ore	15,963	14,226	10,501
Merchandise l.c.l.	145,078	158,661	147,685
Miscellaneous ..	375,096	328,908	259,301
March 21	796,640	769,984	620,375
March 14	799,356	759,607	619,388
March 7	770,697	742,617	620,596
February 28 ...	781,419	756,670	634,636
February 21 ...	774,595	678,523	595,383
Cumulative Total, 12 Weeks ...	9,347,739	8,593,182	7,541,609

In Canada. — Carloadings for the week ended March 21 totaled 64,879, as compared with 62,795 in the previous week and 56,090 in the corresponding week last year, according to the summary of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
March 21, 1942	64,879	33,684
March 14, 1942	62,795	33,114
March 7, 1942	62,137	33,609
March 22, 1941	56,090	29,749
Cumulative Totals for Canada:		
March 21, 1942	734,926	379,769
March 22, 1941	642,823	340,857
March 23, 1940	560,913	289,118

Express Agency Denied Truck Route

The Interstate Commerce Commission, Division 5, has denied the application of the Railway Express Agency, Inc., for a certificate authorizing common-carrier trucking operations over a 136-mile route between Cincinnati, Ohio, and Lima. R. E. A. sought to establish the trucking service to handle express shipments formerly moved on Baltimore & Ohio trains which have been speeded up to the point where the express could not be loaded or unloaded during the brief stops made for passengers.

The commission found, however, that with three other daily passenger trains operating in each direction between Cincinnati and Lima, the express service between those points remains adequate.

Safety Section Cancels Annual Meeting

The Safety Section of the Association of American Railroads will hold no formal annual meeting in 1942 "on account of existing conditions confronting the railroads." The committee of direction has voted to extend automatically the terms of office of the chairman and vice-chairman and members of the committee one year. The usual reports of the separate standing committees will be prepared and distributed on or about June 1. Likewise, the usual regional safety meetings will not be held this year for the same reasons which make it desirable to cancel the annual meeting of the Section itself.

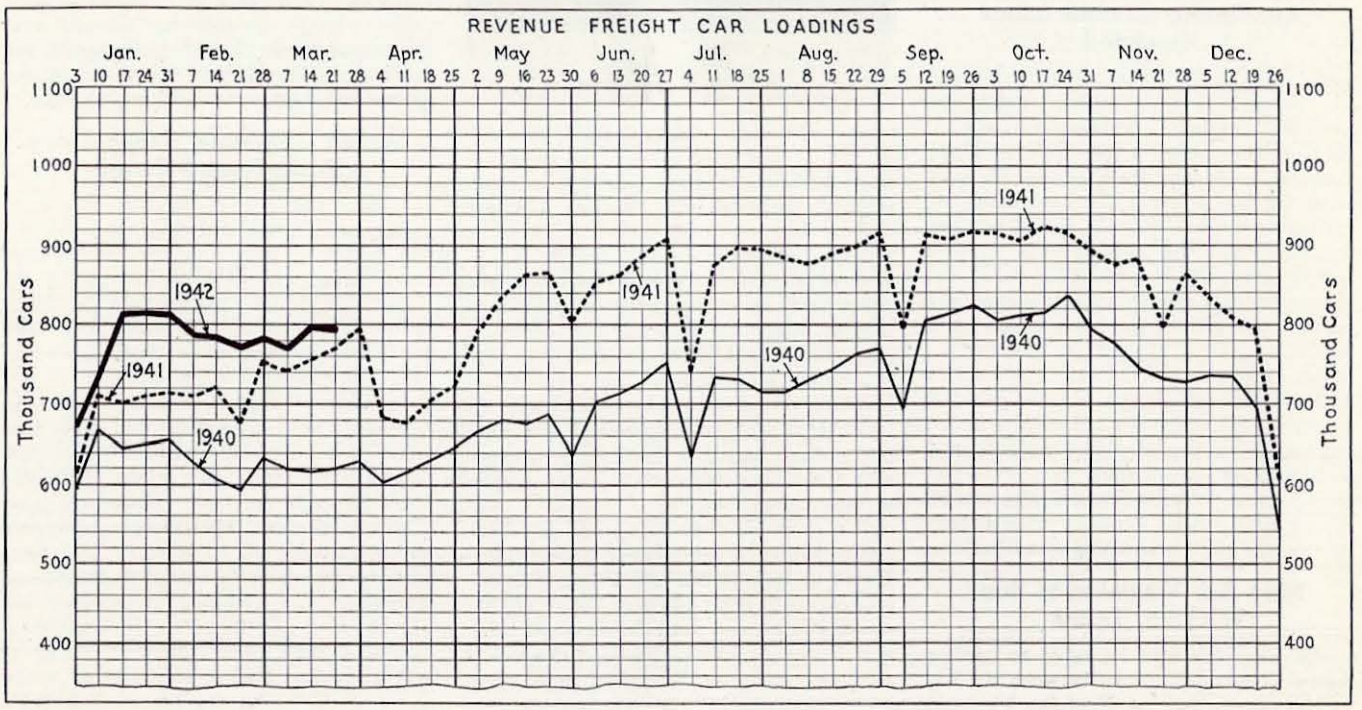
The safety poster issued by the Section for May pictures a fast freight train and bears the slogan "Keep Them Moving Safely."

Atlantic Shippers to Meet April 8-9

The Atlantic States Shippers Advisory Board will hold its 58th regular meeting at the Benjamin Franklin Hotel, Philadelphia, Pa., on April 9 at 9:30 a. m. The tentative docket includes, in addition to regular committee reports, a discussion of "Sailing Days or Consolidation LCL Merchandise Cars" and a discussion from the floor on possible inconveniences due to absence of banking facilities during week-ends. At a special luncheon that day, sponsored by the Traffic Club of Philadelphia and the Chamber of Commerce, Joseph B. Eastman, director, Office of Defense Transportation, will be the principal speaker. On the evening of the previous day a special freight loss and damage prevention committee will hold an open meeting to which employers of shippers, receivers and carriers are invited.

Illinois Manufacturers Opposed to Land Grant Rates

The Illinois Manufacturers' Association, on March 26, sent a resolution to Illinois members of Congress and to the Association of American Railroads, urging the elimination of reduced freight rates on naval and military shipments. The resolution emphasized that: (1) difficult financial conditions of carriers make the cessation of land grant rates in the public interest; (2) land grant rates are a subsidy to the public, paid at the expense of those shipping or traveling by rail; (3) the elimination of the rates will relieve the shipping and traveling public of the burden of higher rates; (4) the recent wage increases



granted by the railroads are not counterbalanced by a percentage of freight rate increases granted by the Interstate Commerce Commission.

A.A.R. Directors Meeting

Directors of the Association of American Railroads held their regular monthly meeting in Washington, D. C., on March 27. Following the meeting no statement was issued as to the proceedings, but it is understood that they included what have become the usual discussion of problems in connection with the lack of adequate materials for new equipment and ways and means of improving equipment utilization.

Joseph B. Eastman, director of the Office of Defense Transportation, and V. V. Boatner, director of ODT's Division of Railway Transport, attended the meeting. It is understood that they were getting the views of the railroad executives as to the present equipment situation, preparatory to making final estimates to the War Production Board on a program for the last eight months of this year.

Resources Board Report

The National Resources Planning Board has issued in printed form its National Resources Development Report for 1942. This is the document which embodies the chapter on "Transportation Problems and Future Development," wherein government ownership in the post-war period of "all rights-of-way" of transportation agencies is called an "urgent need" if a "properly conceived modernization of the transport plant as a whole" is to be achieved.

That transportation discussion was reviewed at length in the *Railway Age* of January 24, page 252, the report having been sent to Congress by President Roosevelt at that time. The report as a whole, the Board's press release said, outlines "the broad objectives of post-war planning for full employment, higher living standards and economic security."

Accounting Classifications Amended

Railroads must divide their profit and loss accounts between earned surplus and unearned surplus, beginning January 1, 1943, under an order of the Interstate Commerce Commission dated March 12. The order further provides for cancellation of the account titled "Grants in aid of construction" and the establishment in lieu thereof of a new account numbered 702½B, "Donations and grants," which will appear on the asset side of the balance sheet and be deducted from property investment accounts in arriving at the net investment in transportation property; consolidation of appropriations of income and surplus in one account, styled "Appropriated surplus;" and revision of the instructions with respect to the treatment of premium and discount on capital stock. Also, it makes other technical changes in the accounting classifications.

May Ask Virginian to Run Workers' Trains

The Virginian may be asked to operate several commuters' trains between the naval operating base at Norfolk, Va., and suburban points, according to the Norfolk Association of Commerce, which discussed the proposal at a recent meeting. The railroad would operate trains serving South Norfolk, Campostella, Chesterfield Heights, Ballentine Place, Fox Hall, Fairmount Park and Estabrook to the naval operating base, which is adjacent to the Virginian's tidewater coal terminal at Sewalls Point. The main line of the Virginian circles the city limits of Norfolk between the suburban points noted and the naval base and does not encounter the congestion of the city. The road now operates one through passenger train daily in each direction, originating at the terminal station in Norfolk's business center.

Car Service Division Creates Tank Car Section

Creation of a Tank Car Section of the Car Service Division was announced this week by the Association of American Railroads. The new section was created "because of the increasing importance in this country of rail transportation of oil and other commodities requiring tank cars due to the present emergency;" its manager is William E. Callahan, who has been associated with the Car Service Division since 1916.

Harris & Ewing

William E. Callahan

"Mr. Callahan's duties," the A. A. R. announcement said, "will be to advise and assist tank car lines, oil companies and shipper owners of tank cars in obtaining still greater utilization of tank cars and expediting still further their movement. He will also maintain close contact with the Office of Petroleum Coordinator and other government agencies directly concerned with the transportation of products handled in tank cars.

"Up to the present emergency, petroleum and petroleum products were largely transported by tankers and pipe lines. Transfer of tankers to other services, however, has resulted in a great deal of this traffic being transferred to the railroads. Practically all tank cars, with the exception of about 9,000 which belong to the railroads, are owned by private tank car and oil companies."

Mr. Callahan was born November 8, 1893, at Branford, Conn. He was educated at Branford High School and La Salle Extension University, entering railroad service in May, 1912, as a clerk on the New York, New Haven & Hartford. Two years later Mr. Callahan became agent for the same road at West Haven, Conn., and he thereafter served as traveling agent from August, 1915, until December, 1916. On the latter date he became traveling inspector for the American Railway Association, remaining in that position until May, 1918, when he began a period of service in the U. S. Army which continued until July, 1919. Mr. Callahan then returned to the A. R. A., serving in turn as chief clerk at Washington, traffic representative at Los Angeles, Calif., and Jacksonville, Fla., and again as chief clerk at Washington. He was in the latter position on April, 1931, when he became district manager for the Car Service Division at Cincinnati, Ohio. Mr. Callahan remained in Cincinnati until September, 1941, when he became office manager for the Car Service Division at Washington, the position he was holding at the time of his appointment as manager of the Tank Car Section.

P. R. R. Gets Truck Route

The Interstate Commerce Commission, Division 5, has granted the Pennsylvania Truck Lines, affiliate of the Pennsylvania, a certificate authorizing common-carrier trucking operations "between the junction of U. S. Highways 30 and 35 and Hamlet, Ind.," approximately two miles. "The proposed extension," said the decision, "is designed to connect the route into Fort Wayne with that between Chicago and Cincinnati and thereby shorten the distances in applicant's operation between Chicago, on the one hand, and numerous points in Indiana, Michigan, Ohio, and Pennsylvania, on the other, and make it possible for applicant to offer an overnight service between such points as compared with second-morning delivery over the present route through Indianapolis, and to render a coordinated rail-motor service at certain points west of Plymouth, Ind."

Would Eliminate Unnecessary Farm-Truck Mileage

A plan under which farmers of a community will be asked to plan their marketing together and eliminate unnecessary truck mileage is being worked out by the Division of Motor Transport, Office of Defense Transportation, in cooperation with the U. S. Department of Agriculture and other governmental agencies.

Pooling of equipment and cooperative hauling of products and supplies is the keystone of the plan by which, ODT officials believe, farm truck mileage can be reduced from 35 to 50 per cent. Under the plan, which at present depends upon voluntary action, farmers will be asked to: (1) Keep their trucks in the best possible mechanical condition; (2) eliminate unnecessary use of vehicles; (3) cooperate in transportation pools with their neighbors; (4) revise marketing and buying programs as necessary. Included in the plan are farmers,

market gardeners, fruit growers, milk producers, livestock haulers and others engaged in transportation of farm products who operate a total of 1,500,000 motor trucks.

Standard Cars Approved by Letter Ballot

As instructed by the Board of Directors of the Association of American Railroads, the Mechanical division Committee on Car Construction, in co-operation with the American Railway Car Institute, has developed designs covering standard A. A. R. box and automobile-box cars having inside dimensions of length, 50 ft. 6 in.; width, 9 ft. 2 in.; height at eaves, 10 ft. 6 in. These are steel-sheathed, wood-lined cars, the box car having alternate arrangements for clear side door openings of 6 ft., 7 ft., and 8 ft., respectively. The automobile-box car has a 15-ft. clear side door opening, with alternate arrangement for an end door. These box car designs were submitted to letter ballot in a circular dated February 24, 1942, and, as a result of a strongly favorable vote, have been approved by the association for inclusion in a supplement to the Manual of Standard Practice of the Mechanical division.

Roads Attack Seatrain Decision

Fifteen railroads filed suit in the federal district court at Newark, N. J., on March 26 attacking the legality of a decision of the Interstate Commerce Commission, dated October 13, 1941, authorizing them to charge only straight per diem for cars of their ownership in possession of Seatrain Lines, Inc., on ocean vessels between Hoboken, N. J., Havana, Cuba, New Orleans, La., and Texas City Tex. The application filed in connection with the suit included a request for a three-judge federal court.

The railroads, which were defendants in I. C. C. No. 25728, Hoboken Manufacturers Railroad Company v. Abilene & Southern Railway Company et al., and No. 25878, New Orleans & Lower Coast Railroad Company v. Akron, Canton & Youngstown Railway Company et al., contended that per diem rates to Seatrain should contemplate that the water carrier which has no cars of its own, should bear its full share of car ownership during idle and unproductive time.

Makes Midwest Facilities Available for Oil Transport to East

Petroleum Coordinator Ickes on March 31 approved and ordered into effect a plan under which oil transportation facilities of the Middle West will be made available at once for the movement of petroleum and petroleum products to the Atlantic Seaboard area. The main objective of the plan, the Ickes announcement said, "is to make possible the release of tank cars now being used only within the district, for service in moving petroleum and its products to the large Eastern consuming area."

The coordinator directed the elimination of all tank car movements from Middle West refinery, water and pipe-line terminals, to all points within 100 miles of such terminals, and the substitution of tank truck facilities. Other provisions of the plan contemplate loading and unloading of tank cars and tank trucks on a seven-day week, 24-hr. per day basis; and making arrangements for common use at all water, pipeline and refinery terminals, of any idle tank cars or tank trucks regardless of ownership. Another specific direction is that the petroleum industry reverse pipe lines so that instead of moving oil south or west they will move it north or east.

In addition to using all transportation facilities to maximum efficiency, Mr. Ickes said that the petroleum industry will reorganize oil movements through a wholesale series of exchanges, loans, and sales of supplies.

Greyvan Lines "Grandfather" Rights

Passing upon "grandfather" clause applications of the Greyvan Lines, the Interstate Commerce Commission has granted to that company a common-carrier certificate authorizing the transportation of household goods between points in 38 states and the District of Columbia.

The same decision also grants certain other rights covering the transportation of cash registers and parts thereof, bakery equipment, dishwashers, scales and parts thereof, and food mixing and cutting machines. In the latter connection, Greyvan had sought authority to handle additional commodities, and Commissioner Mahaffie, who filed a concurring-in-part expression, would have granted the applicant's request for authority covering the transportation of "domestic, institutional, office and commercial furniture, furnishings, appliances, equipment, displays, machines, surgical instruments, musical instruments, fittings, fixtures, parts and supplies."

Eastern Roads Cut Service Men's Meal Charges

Members of the armed forces, when in uniform and traveling at their own expense, will be granted a 10 per cent reduction on meals served in dining cars, cafe-coaches, lunch and counter cars of 18 Eastern roads, according to a joint announcement on March 31 by C. L. Hunter, chairman, Passenger department, Trunk Line Association, and C. A. Fox, chairman, Central Passenger Association. Effective April 1, the reduction will apply to individual servings of food and beverages amounting to 50 cents or more. In order that those eligible may be advised of the reduction, suitably worded announcements will be handed to uniformed men when taking their seats at tables or counters.

Corresponding regulations will be made effective by the Pullman Company in its broiler-cafe cars and other Pullman equipment affording meal service operated on the railroads named above. The reduction will not apply to purchases of cigarettes, cigars or bottled beverages.

Pacific Northwest Board Meeting

Shippers of the Pacific Northwest will require 251,235 more railroad cars for the second quarter of 1942 than they used during the same period last year, it was forecast at the sixteenth annual meeting of the Pacific Northwest Shippers Advisory Board at Portland, Ore., on March 27. This is an increase of 14.3 per cent or 349 cars per day, and will bring the total number of cars loaded daily to 2,791.

Plans for handling the additional business include the formation of shippers committees at sixteen principal shipping points in the Northwest to secure greater efficiency in the use of cars. Additional local car efficiency committees are being formed at other points.

Officers elected for the ensuing year are as follows: President, K. C. Batchelder, traffic manager of the West Coast Lumbermen's Association, Seattle, Wash.; vice-president, Gordon Tongue, secretary-treasurer of the Superior Portland Cement Company, Seattle; executive secretary, H. D. Smith, western traffic manager of the Weyerhauser Sales Company, Tacoma; and secretary, F. T. Westmeyer, district manager of the Car Service division of the Association of American Railroads, Seattle.

High Court to Pass Upon Railway Labor Act

The United States Supreme Court at its March 30 session decided to review the constitutionality of the Railway Labor Act. The case under consideration by the Court was the Washington Terminal Company versus Boswell, and it had been brought by the terminal company against certain of its employees in an attempt to test the National Railroad Adjustment Board's power to interpret so-called "feather bed rules."

Specifically, the Supreme Court has decided to pass upon a ruling of the United States Court of Appeals for the District of Columbia which held that the findings of the Adjustment Board are not subject to judicial review by the federal district courts or circuit courts of appeals. (See *Railway Age* of November 22, 1941, page 888.)

In noting that the writ of certiorari had been granted, the Supreme Court said that "the court hereby certifies to the Attorney General of the United States that the constitutionality of the Railway Labor Act is drawn in question in this cause."

Transport Board Seeks Material for Interterritorial Rate Study

The Transportation Board of Investigation and Research has sent a letter to parties known to be interested in the interterritorial freight rate study recently undertaken by the Board suggesting that they may desire to acquaint the Board with their views on the problem and to submit factual data pertinent to the inquiry. A general invitation is extended to any other parties to submit similar material if they so desire.

The interterritorial freight rate study will be nation-wide in scope, and will include both class and commodity rates. The Board would like to obtain information relating to the following matters: Nature and volume of interterritorial freight movements; average rate levels in the different rate territories; comparative rate levels on particular commodities in the several rate territories; methods of constructing interterritorial rates and their relation to intraterri-

torial rates; relative cost of providing transportation service in the different rate territories; and the economic effects of regional differences in rate levels, of regional differences in distribution of the transportation burden between different commodities, and of the methods of constructing interterritorial rates.

It is desired that such material be submitted to the Board as soon as possible, but not later than June 1.

Voorhis Bill on Post-War Planning Is Reported

The House of Representatives committee on labor has reported favorably to the House the joint resolution (H. J. Res. 291) introduced by Representative Voorhis, Democrat of California, to establish a National Commission for Post-War Planning.

The commission would consist of five members of the Senate appointed by the president of the Senate; five members of the House appointed by the speaker; and 24 members appointed by the President. Presidential appointees would include three from the executive branch of the government; three from organizations of farmers; three from labor organizations; three from business and industry; one from organizations of banks and financial institutions; three from church organizations; two from educational associations; three from organizations of consumers, "at least two of whom shall be from associations of consumer cooperatives"; one from public health and welfare associations; one "outstanding economist"; and one "outstanding industrial engineer."

T. P. & W. Employees File Motion for New Trial

A motion for a new trial for three men found guilty last week of contempt of court, based on violation of an anti-violence injunction issued by the federal district court to striking workmen of the Toledo, Peoria & Western, was filed on March 31. The men were found guilty by a jury on March 26. Attorneys for the respondents, in asking that the jury's verdict be set aside, claim the court erred in reading to the jury instructions "reduced to writing and to which exception was taken by the respondents." They further claimed that the verdict is contrary to law and evidence, that the evidence was not sufficiently competent, and that the court erred in not granting the respondents' motions to discharge the rules to show cause why they should not be held in contempt.

In the trial on March 26, of Paul Brokaw, publicity agent for the Brotherhood of Locomotive Firemen and Enginemen; Delmar Newdigate, local chairman of the Brotherhood of Railroad Trainmen, and H. J. Dilley, a former T. P. & W. fireman, a jury of five women and seven men returned a verdict of guilty in twenty-seven minutes. The defendants were charged with conspiring to blow up a bridge during the strike.

In its petition, the railroad contended that William Wheeler was hired for $1,270 to blast the road's Walnut creek bridge, west of Eureka and a half mile north of the highway crossing Walnut creek, the night of January 27. In his affidavit and testimony Wheeler said that Dilley communicated with him regarding the blasting of the bridge on January 26, that Brokaw paid him the money and that Newdigate acquainted him with the surroundings of the bridge to be dynamited.

Two additional strikers, Hustler Wilson and Frank W. Lucas, will go on trial for contempt on April 13, it having been charged that they are responsible for various acts of violence occurring after the injunction was issued in the federal court. George P. McNear, president of the railroad; H. H. Best, superintendent; and R. B. Gifford, trainmaster, will be arranged in the district court at Peoria, on April 6, charged with having violated provisions of the National Railway Labor Act.

ODT Appointments

A. V. Bourque, executive secretary of the Tank Car Service Committee with headquarters at Chicago, and Samuel Elder, Boston, Mass., and Washington, D. C., attorney, who assisted in the collection of data for the industry report on petroleum transportation to the Temporary National Economic Committee, have been appointed consultants to Fayette B. Dow, Office of Defense Transportation assistant on pipe lines, tankers, tank cars, and tank trucks. Harry D. Crooks, president of Crooks Terminal Warehouses, Inc., Chicago, who was a consultant to former Defense Transportation Commissioner Ralph Budd, has been appointed consultant in ODT's Division of Storage.

Charles T. Ripley, chief engineer, Technical Board of the Wrought Steel Wheel Industry, has been named a consultant on Diesel engine propulsion equipment in the Section of Materials and Equipment. Mr. Ripley took over that assignment in addition to his present job as consultant on steam, Diesel and electric locomotives, when the original appointee—H. L. Hamilton, manager of the Electro-Motive Division of the General Motors Corporation—was unable to accept the position.

Where Will the Wheat Crop Go?

(*Continued from page 707*)

wheat now in storage could give no reassurance. He defended the "ever-normal granary" plan, which—plus the cutting off of much of the export trade—is responsible for the present situation, but advanced no ideas as to how the storage jam could be relieved. He stated that the Department of Agriculture was making a survey of all available storage space, the results of which would shortly be made public, and announced that the committees on grain storage information that proved valuable last year would be re-established. Last year, there was considerable additional storage space erected, but shortage of materials has now stopped this.

Colonel J. M. Johnson, member of the Interstate Commerce Commission, stated that apparently there was no problem this year so far as the transportation of wheat was concerned, as, with the elevators glutted, the wheat could not be moved in any quantities. "Storage," he said, "is a part of transportation, but transportation is not a part of storage. We are not going to store wheat in railroad cars and certain practices of previous years of misusing cars so as to avoid demurrage will be eliminated. Not a single car of wheat will be loaded that won't go straight through to destination."

L. M. Betts, manager, Closed Car section, Car Service division, A.A.R., emphasized the fact that freight cars cannot and will not be used for grain storage. "Railroad car supply," he said, "must be kept liquid for war transportation needs. Cars simply cannot be provided for loading grain or any other commodity unless the railroads are certain that they will be promptly unloaded at destination. This means that, unless there is a marked improvement in the grain storage situation between now and harvest time, it will be necessary to enforce regulations under which no cars of either new or old wheat can be loaded unless assurance can be given that space in terminal elevators has been assigned to the grain. Railroads repeat their pledge of last year that they will provide cars for the movement of every bushel of wheat that can be unloaded promptly at billed destination."

WPB Names Co-ordinator for Rubber

Appointment of Arthur B. Newhall as co-ordinator for rubber, with broad powers to direct and integrate all current programs dealing with the use, control or production of natural and synthetic rubber, was announced March 31 by Donald M. Nelson, chairman of the War Production Board.

Subject to the direction of the chairman, Mr. Newhall will, among other duties, determine policies and standards to govern priorities and allocations with respect to rubber, including both allocations as between essential civilian needs and other broad classes of demand and allocations among particular civilian needs; and coordinate the rationing of rubber tires and tubes by the Office of Price Administration with activities within the WPB relating to rubber.

Prior to his present appointment, Mr. Newhall was serving as chief of the Rubber and Rubber Products Branch, Division of Industry Operations. He is on leave from his position as executive vice-president of Talon, Inc., of Meadville, Pa.; until 1939 he was executive vice-president of the Goodrich Tire and Rubber Company.

Ask I. C. C. to Lift Illinois Bar to Rate Increases

Following suspension of increases in intrastate freight rates in Illinois by the Illinois Commerce Commission, railroads in that state petitioned the Interstate Commerce Commission, on March 28, for an order which would place the rates authorized by that body in effect between points within the state. The move was taken after the Illinois Commerce Commission, in a surprise action on March 26, suspended the new intrastate tariffs for 120 days pending further hearings. Otherwise, the tariffs would have become effective on April 13. The petition of the carriers pointed out that

the state commissions of Indiana, Iowa, Kentucky, Michigan and Missouri had granted increases in the intrastate freight rate levels, and that these increases are all in effect, except in Iowa, where the effective date has been set for April 6. Meanwhile, the petition claimed, the present intrastate freight rates in Illinois which the Illinois Commerce Commission is keeping in effect, yield about $3,000,000 less a year in revenues than the total sought in the rate boosts.

"In creating this situation," the petition read, "the action of the Illinois commission causes an undue, unjust and unreasonable discrimination against interstate commerce."

All-Commodity Rates, Butte, Mont., to Spokane, Wash.

Establishment of an all-commodity rate of 90 cents per 100 lb., minimum 5,000 lb., for application between Butte, Mont., and Spokane, Wash., has been approved by the Interstate Commerce Commission, Division 2. Present first to fourth class rates range from 166 cents to 100 cents per 100 lb.

The decision revealed that the all-commodity rate represents an effort by the railroads to obtain traffic of freight forwarders moving between Butte and Spokane. Having insufficient traffic for carload shipments from Chicago to Spokane, the forwarders have been shipping Chicago-Spokane freight under all-commodity rates in cars containing traffic destined for Butte. From the latter point the Spokane traffic has been transported by motor truck. Before proposing the all-commodity rate of 90 cents, the railroads "ascertained that certain motor common carriers had entered into special arrangements with the freight forwarders, whereby the traffic from Butte to Spokane was handled by those motor carriers at a division of 90 cents out of the through charge of the forwarder from the point of origin to Spokane, in which the motor carriers participated with the forwarders." Leading up to its conclusion approving the railroad tariffs, the commission observed that "it is of importance" that the through charge of the forwarders out of which protesting truck lines "derive a 'split' or division is wholly unregulated."

The majority report represents the views of Commissioners Aitchison and Splawn, the dissent of Commissioner Alldredge being noted.

MOP Security Holders Reject Revamping Plan

Security holders of the Missouri Pacific have voted to reject the Interstate Commerce Commission's final plan of reorganization for this company. This fact was revealed on March 31 when Division 4 of the commission certified the results of the recent balloting on the acceptance or rejection of the plan to the federal district court for the eastern district of Missouri, eastern division.

The commission's certificate showed that in six of the 16 classes of security holders eligible to vote more than one-third have rejected the plan. The law requires that 66⅔ per cent of those voting in each class must approve the plan.

However, section 77 also provides that the district court, if it finds that the plan makes equitable provision for all security holders, may declare it effective even though 66⅔ of each class of holders have not approved it.

The classes of holders rejecting the plan included: Class 3—New Orleans, Texas & Mexico capital stock — 69.05 per cent of those voting rejected the plan; Class 4—General unsecured claims against the Missouri Pacific and Missouri Pacific 5½ per cent 20-year convertible bonds, series A—79.77 per cent of those voting rejected the plan; Class 13—Little Rock & Hot Springs Western first mortgage four per cent bonds—100 per cent of those voting rejected the plan; Class 18—Missouri Pacific general mortgage four per cent bonds—73.24 per cent of those voting rejected the plan; Class 19—Missouri Pacific secured serial 4½ per cent bonds—68.93 per cent of those voting rejected the plan; and Class 23—International-Great Northern adjustment mortgage six per cent bonds, series A—73.17 per cent of those voting rejected the plan.

Club Meetings

The Traffic Club of Newark, N. J., will hold its next regular meeting at the Robert Treat hotel on Monday, April 6. The program has been entitled "April—Perfect Shipping Month" and "Old-Timers' Night." The next traffic club forum will be held at the same headquarters on April 13, the subject being "Carloading."

The Eastern Car Foreman's Association will hold its next meeting on April 10 at the Engineering Societies building, 29 West 39th street, New York, at 8 p. m. "Lubrication of Cars and Rolling Equipment" will be discussed by W. H. Foster, service engineer, Socony Vacuum Oil Company, New York.

The Northwest Car Men's Association will hold its next meeting on April 6 at the Midway Club, St. Paul, Minn., at 8 p. m. B. W. Locke will present a paper entitled "Manufacture and Use of Waste."

The Car Foremen's Association of Chicago will hold its next meeting on April 13 at the LaSalle hotel, Chicago, at 8 p. m. Goodrich A. Lewis, chief engineer, W. H. Miner, Inc., will present a paper on "Draft Gear Maintenance."

RR Investment Now Pays 3.85%

(Continued from page 708)

988, in the same period of 1941. Gross in the Southern district in the two months totaled $132,672,031, an increase of 27.3 per cent compared with the same period in 1941, while operating expenses totaled $92,222,417 an increase of 29.3 per cent above 1941.

For February alone the estimated net income in the Southern district was $5,900,000 compared with $4,700,000 in February, 1941. Net railway operating income amounted to $11,745,815 compared with $10,440,518 in February, 1941.

Class I roads in the Western district in the two months had an estimated net income of $18,200,000 compared with a deficit of $7,200,000 in the same period last year. Those same roads had a net railway operating income of $58,490,988, compared with $32,245,099, in the same period in 1941. Gross in the Western district in the two months totaled $357,955,045, an increase of 40.3 per cent compared with the same period in 1941, while operating expenses totaled $250,477,077 an increase of 31.2 per cent above 1941.

In the Western district for February alone the estimated net income was $9,600,000 compared with a deficit of $4,500,000 in February, 1941. Net railway operating income, amounted to $29,057,477 compared with $15,163,618 in February, 1941.

CLASS I RAILROADS—UNITED STATES

Month of February

	1942	1941
Total operating revenues	$462,486,015	$358,413,499
Total operating expenses	327,653,379	255,590,196
Operating ratio—per cent	70.85	71.31
Taxes	56,736,208	34,668,724
Net railway operating income (Earnings before charges)	66,486,021	58,135,957
Net income, after charges (estimated)	23,800,000	15,000,000

Two Months Ended February 28

Total operating revenues	$943,177,171	$735,787,689
Total operating expenses	676,434,315	524,559,078
Operating ratio—per cent	71.72	71.29
Taxes	107,901,279	70,524,898
Net railway operating income (Earnings before charges)	135,450,263	120,156,258
Net income, after charges (estimated)	49,700,000	34,700,000

February Truck Volume 13.5 Per Cent Over 1941

The volume of freight transported by motor truck in February declined 3.9 per cent under January, but represented an increase of 13.5 per cent over February, 1941, according to American Trucking Associations.

Comparable reports were received by A. T. A. from 227 motor carriers in 42 states. The reporting carriers transported an aggregate of 1,440,067 tons in February, as against 1,498,708 tons in January, and 1,269,160 tons in February, 1941. The A. T. A. index figure, based on the 1938-1940 average monthly tonnage of the reporting carriers, was 143.76 for February as compared with January's 152.56.

Slightly more than 78 per cent of all tonnage transported in the month was reported by carriers of general freight. The volume in this category decreased 2.4 per cent under January, but held 15.3 per cent over February of last year. Transporters of petroleum products, accounting for a little more than 13 per cent of the total tonnage reported, showed a decrease of 8.4 per cent under January, but an increase of 44.8 per cent over February, 1941. Movement of new automobiles and trucks continued to drop sharply, and constituted only about 1.5 per cent of the total tonnage reported. Tonnage in this class dropped 26.9 per cent under January, and 51.7 per cent under February of last year. Haulers of iron and steel products reported slightly more than three per cent of the total tonnage. The volume of these commodities decreased three per cent under January and 28.1 per cent under February, 1941. A little more than four per cent of the

total tonnage reported was miscellaneous commodities, including tobacco, milk, textile products, bricks, building materials, cement and household goods. Tonnage in this class decreased 6.8 per cent under January, but held 9.9 per cent above February of last year.

Embargo on African Freight

The Car Service Division, Association of American Railroads, has issued embargo No. 24, establishing the permit system on all freight moving through Atlantic and Gulf ports for export to countries in South and East Africa. Excepted is freight consigned to the Army or Navy, freight moving on U. S. Government bills-of-lading or on commercial bills-of-lading carrying reference to contracts made by the War, Treasury or Agriculture departments; and freight for the British Ministry of War Transport. Also, any freight moving on permits issued by the Car Service Division's manager of port traffic.

Forecast 14.6 Per Cent Increase in Carloadings

Freight carloadings in the second quarter of 1942 are expected to be 14.6 per cent above actual loadings in the same quarter in 1941, according to estimates compiled by the 13 Shippers' Advisory Boards.

On the basis of those estimates, freight carloadings of the 28 principal commodities will be 7,475,175 in the second quarter of 1942 compared with 6,525,083 for the same commodities in the corresponding period in 1941. All of the 13 Boards estimate an increase for the second quarter of 1942 compared with the same period in 1941.

These estimates normally include 29 commodities, but no estimate as to production of automobiles, trucks and parts is being made at this time owing to conversion of that industry into the production of war materials.

The tabulation below shows actual carloadings for each district in the second quarter of 1941, the estimated loadings for the second quarter of 1942, and the percentage of increase of the 28 principal commodities:

Shippers' Advisory Boards	Actual Loadings Second Quarter 1941	Estimated Loadings Second Quarter 1942	Per cent Increase
New England ..	123,064	128,189	4.2
Atlantic States..	666,179	730,145	9.6
Allegheny	910,698	1,130,267	24.1
Ohio Valley	790,550	1,057,700	33.8
Southeast	776,237	826,559	6.5
Great Lakes	508,847	580,184	14.0
Central Western.	175,923	197,792	12.4
Mid-West	819,174	877,783	7.2
Northwest	575,011	648,729	12.8
Trans-Missouri-Kansas	295,952	308,077	4.1
Southwest	384,753	437,945	13.8
Pacific Coast ...	284,693	305,302	7.2
Pacific Northwest	214,002	246,503	15.2
TOTAL	6,525,083	7,475,175	14.6

The 13 Boards expect an increase in the second quarter of 1942, compared with the same period one year ago, in the loading of all of the 28 commodities except cotton seed and products, other than cotton seed oil, for which a decrease of 4.1 per cent is estimated; agricultural implements and vehicles other than automobiles, for which a decrease of 26.7 per cent is estimated; and sugar, syrup and molasses for which a decrease of 1.2 per cent is estimated.

Among those expected to show increases are the following: Coal and coke, 31.1 per cent; citrus fruits, 17.5 per cent; grain, 17.4 per cent; gravel, sand and stone, 17.2 per cent; chemicals and explosives, 16.3 per cent; cotton, 12.7 per cent; ore and concentrates, 12.5 per cent; machinery and boilers, 12.1 per cent; fertilizers of all kinds, 9.9 per cent; paper, paperboard and prepared roofing, 9.8 per cent; livestock, 9 per cent; potatoes, 8.5 per cent; canned goods, 7.9 per cent; lumber and forest products, 7.4 per cent; and flour, meal and other mill products, 7 per cent.

Retirement Board Operations

February benefit payments under the Railroad Retirement Act totaled $10,594,583, bringing to $84,188,256 payments for the first eight months of the fiscal year 1942, according to the Railroad Retirement Board's Monthly Review.

Benefits certified from the beginning of operations through February amounted to $514,313,889 on 156,716 employee annuities, 48,557 pensions, 3,218 survivor annuities, 6,203 death benefit annuities, and 51,017 lump-sum death benefits.

In February, 1,654 new employee annuities were certified, 23.2 per cent fewer than in February, 1941. The relatively small February, 1942, total, "reflects in part adjustments incident to preparation for the removal of the Board to Chicago."

Employee annuities in force at the end of February totaled 124,575 at a monthly amount payable of $8,208,846. The average monthly payments was $65.89. Pensions in force at the end of February totaled 28,768 with a monthly amount payable of $1,696,207. The average monthly payment was $58.96.

Unemployment insurance claims received in February totaled 70,642. The weekly average of 17,661 was about 1,550 lower than in the preceding month. Applications for certificates of benefit rights averaged 1,154 a week, about 1,800 below the January figure. In the last week of February the total number of applications was only 766, the second lowest figure for a complete week recorded so far for the current insurance year. Benefits certified in February totaled $1,328,797, about $25,000 more than in the preceding month. The average benefit on claims with a maximum of 10 compensable days was $20.84.

Employment service operations declined further in February, placements averaging 430 a week compared with 620 in January and 1,250 in December. Less than 15 per cent of the 1,730 placements were in non-railroad jobs. Most of the jobs filled were in laborer classifications.

Petitions Attack North Shore Compromise

Termination of the compromise under which trains of the Chicago, North Shore & Milwaukee have been operated within the limits of Chicago by elevated railway employees was requested in two petitions filed with the district court at Chicago, on March 29. In the first, the attorney for the Brotherhood of Locomotive Firemen and Enginemen, the Brotherhood of Railroad Trainmen, and the Order of Railroad Telegraphers, which recently won bargaining rights on the North Shore Line, charged that the compromise is costing the company $1,000 per day as the result of the higher rates paid elevated employees and because of the waiting time entailed by North Shore line crews at the city limits, for which the crews are requesting compensation. He also pointed out that while elevated crews run a train, they do not collect fares, and as a result passengers are buying tickets only to the city limits and are riding free from that point to the center of Chicago, a distance of 9 miles.

The second petition, filed by the Independent Mortgage Bondholders Committee, asked that North Shore employees again be permitted to bring their trains into the loop and that also either A. W. Sprague and Bernard J. Fallon be removed as receivers or that a third receiver be appointed. The petition asserted that the co-receivers, who are also co-trustees of the elevated lines, cannot properly act in behalf of the North Shore.

The dispute dates back to February 1, when members of the Amalgamated Association of Street, Electric Railway & Motor Coach Employees on the elevated lines refused to throw switches so that North Shore trains could enter and leave the city on the elevated tracks. For two weeks North Shore passengers were forced to ride the elevated trains within the city, transferring to and from the North Shore trains at the city limits. Amalgamated and the North Shore finally reached an agreement which provided that elevated crews should operate the North Shore trains within the city.

Says 25,000 Cars Await Unloading: Car Service Division Denies It

During the hearings this week on the tax bill before the House ways and means committee, reported elsewhere in this issue, the charge was made that some 25,000 cars of coal are standing on railroad side tracks between Norfolk, Va., and Roanoke, waiting for ships for unloading at the Hampton Roads ports.

This statement was made by Representative Robertson, Democrat of Virginia and a member of the ways and means committee, during his questioning of R. V. Fletcher, vice-president of the Association of American Railroads.

Mr. Fletcher had declared that the railroads would be able to handle the war traffic in addition to the civilian traffic if the carriers are able to obtain the necessary steel for new equipment. Mr. Robertson reminded Mr. Fletcher that the railroads had promised that in this war they would not permit their cars to be used for storage, a condition which led to the government taking over the carriers in the last war. "Yes," replied Mr. Fletcher, "that is true."

"Well, I want to tell you," asserted the Virginia congressman, "that only this week a high railroad official came into my office and told me that at the present time there are 25,000 cars of coal on the tracks between Norfolk and Roanoke waiting to be unloaded at the Hampton Roads ports due to the lack of boats to haul the coal to New England." "I can't dispute that," was Mr. Fletcher's reply.

The A. A. R. vice-president did go on to say that one of the difficulties at the present time was the inability to get ships at ports and the uncertainty of their arrival, thus making it difficult to be sure of getting cars unloaded once they are sent to a port.

Officials at the Car Service Division of the Association of American Railroads declared that there was no basis in fact for Mr. Robertson's statement. They went on to point out that dumpings at Hampton Roads have fallen off about 40 per cent since the present outbreak of submarine warfare on the Atlantic seaboard, but that at no time in recent months has the amount of coal on hand at those ports or in transit exceeded 7,500 cars. They are at a loss to know where the Virginia congressman received any such information.

Carriers Present Their Views on the Tax Bill

The railroad industry's views on the current tax bill were given to the House ways and means committee on April 1 at a public hearing. The principal suggestions made by railroad spokesmen included one for a revision of the capital gains tax to permit individual roads to buy in their own bonds without being taxed on the "profits" which would result from the difference in the par value of the securities and the discount prices at which they were bought, and one to change the present law so as to make it possible for roads now in reorganization to come out without being taxed so much as to prevent the consummation of the reorganization.

Appearing for the carriers were R. V. Fletcher, vice-president of the Association of American Railroads; R. B. White, president of the Baltimore & Ohio; F. E. Williamson, president of the New York Central; R. E. Connolly, vice-president of the Illinois Central; and L. M. Greenlaw, vice-president and general counsel of the Pullman Company.

Mr. Fletcher explained to the committee that the present law permits railroad companies to buy up their own securities and to have the so-called "profit" gained thereby excluded from their gross income provided it is established to the satisfaction of the Commissioner of Internal Revenue or certified to the Commissioner by the Reconstruction Finance Corporation or the Interstate Commerce Commission that at the time of the purchase the road was in "an unsound financial condition." Moreover, he continued, that provision in the law expires this year.

Mr. Fletcher declared that experience has shown, however, "that the use of the term 'in an unsound financial condition' has prevented this provision from being of any substantial benefit to railroads or to others." This was due, he further explained, because of the fact that no carrier was willing to have itself declared in unsound financial condition for fear that such a finding would have a detrimental effect on its credit standing and its ability to buy materials and float equipment trusts. Also, the carriers felt that such a finding might impair their ability to obtain financial help from the RFC if such help should be needed at any time.

As a result of the working of the law, Mr. Fletcher suggested to the committee that it change the provision to permit all railroad corporations, regardless of their financial condition, to purchase their own securities in the market for retirement without at the same time making them subject to capital gains tax.

The A.A.R. spokesman also asked the committee to make changes in the present tax law which would permit railroads to deduct for tax purposes depreciation on properties operated under lease. Under certain rulings of the United States Supreme Court depreciation on property leased by a common carrier cannot be taken into account in determining taxable income.

Another suggestion made by Mr. Fletcher which has received the approval of the Treasury Department is that the privilege of making consolidated returns be extended to all corporations. "It seems to us, however," declared the railroad witness, "that without regard to stock ownership, consolidated returns should be permitted in the case of lessor railroad corporations in an affiliated group where, under the contract or lease, the lessee and not the lessor has the obligations to pay the income tax of the lessor. Many of our railroad systems include roads that were leased by the proprietary companies for long terms of years. The leased line is operated as a part of the railroad system. The leased line is no more than an operating division and is a part of the through route. The money out of which the rental is paid to the lessor comes from the operation of the integrated economic unit which constitutes the parent or lessee carrier."

Mr. Fletcher also endorsed the proposal of the Treasury Department to repeal the capital stock and excess profits taxes. However, he said, if these taxes are to be retained the carriers renew their suggestion that the taxpayer be permitted to make annual declarations of value.

The carriers through Mr. Fletcher also asked that any authority given the Treasury to impose a withholding tax on income, interest, and dividends exempt interest from tax free covenant bonds. Such a withholding tax, according to Mr. Fletcher, would be an additional tax on the issuer of the bonds, and would have to be paid by such issuer rather than the individual.

Turning lastly to the subject of taxes on railroad reorganizations, Mr. Fletcher told the committee that the problems involved are now the subject of friendly discussion among security owners, railroad counsel, officials of the Treasury and the Chief of Staff of the Joint Committee on Internal Revenue Taxation. "No announcement as a result of these conferences can as yet be made," he said, "but those of us concerned with the welfare of the railroad industry are hopeful that ultimately some understanding may be arrived at as the basis for such a joint recommendation."

"The problems to which I refer," declared the A. A. R. vice-president, "are two in number. First, it is highly important that for the purpose of taxation a reorganized railroad, whether operating under the old charter or a new, should have preserved the same basis of property that prevailed with the old company, a principle the desirability of which has been recognized by the Interstate Commerce Commission. This question of what constitutes a proper basis of property enters into a consideration of what shall constitute invested capital for the purpose of determining the excess profits tax which may be imposed upon a reorganized railroad."

"Second, it is highly important that the reorganization should be tax free, that is to say there should be no taxable gain or profit simply by reason of the fact that there has been a reduction in the capitalization as is represented by indebtedness."

Mr. White, Mr. Williamson, and Mr. Connolly appeared briefly to support that part of Mr. Fletcher's testimony dealing with the purchase of railroad securities. All three urged that the requirement of a finding or a certificate of unsound financial condition be omitted and that this provision of the law be made permanent or extended beyond its present expiration date.

Mr. Greenlaw on behalf of the Pullman Company, objected to the Treasury's proposal for an added 15 per cent tax on Pullman accommodations, making the total tax 20 per cent. He declared that his company feared that the imposition of such a tax would dislocate passenger traffic by forcing people who normally use drawing rooms and roomettes to purchase lower berths or ride in coaches.

He also suggested to the committee that it might close up a loophole in the present tax law which permits one to escape the present tax on transportation by having purchased scrip books in advance of the effective date of the law. To do this, he said, the law could be changed to provide for the tax on all transportation used after the effective date rather than on just that portion purchased after that time.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago, Ill.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, G. M. & O. R. R., 105 W. Adams St., Chicago, Ill.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. P. Soebbing, 1431 Railway Exchange Bldg., St. Louis, Mo. Annual meeting, October 6-8, 1942, Omaha, Neb.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Room 332, Dearborn Station, Chicago, Ill. Annual meeting, May 12-14, 1942, Hotel Stevens, Chicago, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—A. G. Shaver, 310 S. Michigan Ave., Chicago, Ill. Annual meeting, October 13-15, 1942, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—H. C. Millman, Ind., Agent, Pennsylvania R. R., Union Station, Chicago, Ill.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 16-18, 1943, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—R. R. Horner (Second Vice-Pres.), Norfolk & Western Magazine, Roanoke, Va.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—J. H. Huntt, Tower Bldg., Washington, D. C.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York, N. Y. Semi-annual meeting, June 8-10, 1942, Statler Hotel, Cleveland, O. Fall meeting, October 12-14, 1942, Sagamore Hotel, Rochester, N. Y. Annual meeting, November

30-December 4, 1942, Hotel Astor, New York, N. Y.
Railroad Division, E. L. Woodward, *Railway Mechanical Engineer*, 105 West Adams St., Chicago, Ill.

AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St. N. W., Washington, D. C. Annual meeting, April 27-29, 1943, Cincinnati, O.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Building, Washington, D. C.
Operations and Maintenance Department.—Charles H. Buford, Vice-President, Transportation Bldg., Washington, D. C.
Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.
Operating Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Transportation Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.
Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York, N. Y.
Freight Station Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.
Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y.
Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 16-18, 1943, Chicago, Ill.
Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 16-18, 1943, Chicago, Ill.
Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill.
Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y. Annual meeting, October 13-14, 1942, Hotel Stevens, Chicago, Ill.
Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago, Ill.
Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago, Ill.
Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Building, Washington, D. C.
Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, April 28-29, 1942, Hotel Sherman, Chicago, Ill.
Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington, D. C.
Car-Service Division.—E. W. Coughlin, Transportation Building, Washington, D. C.
Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Building, Washington, D. C.
Accounting Division.—E. R. Ford, Transportation Building, Washington, D. C.
Treasury Division.—E. R. Ford, Transportation Building, Washington, D. C.
Traffic Department. A. F. Cleveland, Vice-President, Transportation Building, Washington, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Claim Agent, Alton R. R., 340 W. Harrison St., Chicago, Ill. Annual meeting, June 17-19, 1942, Hotel Statler, Buffalo, N. Y.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—P. R. Austin, Johns-Manville Sales Corp., Merchandise Mart, Chicago, Ill. Exhibit in conjunction with convention of the American Railway Bridge & Building Association, October 13-15, 1942, Hotel Stevens, Chicago, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month except June, July and August, Windsor Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS, MO.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—Frank Kartheiser, Chief Clerk, Mechanical Dept., C. B. & Q., Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 8238 S. Campbell Ave., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—Mrs. M. D. Reed, 1840-42 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—J. T. Bougher, 424 W. 33rd St. (11th floor), New York, N. Y.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York, N. Y. Regular meetings, second Friday of January, March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker Street, No. Little Rock, Ark.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington, D. C. Annual meeting, November, 1942, Dallas, Tex.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle St., Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Touraine, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September, and December, 29 W. 39th St., New York, N. Y.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box A, Sausalito, Cal. Regular meetings, second Thursday of each alternate month, at Palace Hotel, San Francisco, Cal., and Hotel Hayward, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1647 Oliver Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 600 W. Jackson Blvd., Chicago, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 La Salle St., Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1647 Oliver Bldg., Pittsburgh, Pa.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 903 Syndicate Trust Bldg., St. Louis, Mo. Annual meeting, May 6-7, 1942, Netherland Plaza Hotel, Cincinnati, O.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—A. G. Shaver, 310 S. Michigan Ave., Chicago, Ill. Annual meeting, September 15-17, 1942, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—D. W. Brantley, C. of Ga. Ry., Savannah, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, O. and C. Company, 59 E. Van Buren St., Chicago, Ill. Exhibit in conjunction with Roadmasters' and Maintenance of Way Association Convention, September 14-17, 1942, Hotel Stevens, Chicago, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 12 Hatfield Place, Port Richmond, Staten Island, N. Y. Annual meeting, October 10-11, 1942, Baltimore, Md.

WESTERN RAILWAY CLUB.—E. E. Thulin (Executive Secretary) Room 822, 310 S. Michigan Ave., Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

Chicago Union Station Averages 236 Trains Daily

An average of 236 trains per day, including 256 locomotives and 1,608 cars, used Chicago Union Station facilities during 1941, according to a report to stockholders. Altogether 85,970 trains moved in and out of the station. The Chicago, Burlington & Quincy operated 31,301 trains into or out of the station; the Chicago, Milwaukee, St. Paul & Pacific, 30,660; the Pennsylvania, 17,535; and the Alton, 6,474.

Equipment and Supplies

Heavy Locomotive Buying in March

Large steam power orders placed; car buying declines as deliveries lag

Continued heavy railroad purchases of steam locomotives featured the domestic railway equipment market during March. Orders were placed during the month for 102 steam engines, more than placed in any preceding March since the 133 units ordered in March, 1929.

An additional large number of locomotives were comprised in inquiries by railroads that came into the market for steam power during March but had not placed orders at the month's end. These, in part, included the Bessemer & Lake Erie inquiry for five 2-10-4's and two 0-8-0's; the Duluth, Missabe & Iron Range inquiry for ten 2-8-8-4's; the Indianapolis Union inquiry for one or two 0-8-0's; and the Western Pacific inquiry for six 4-8-4's. Directors of the Illinois Central approved a large locomotive-buying program.

Also reported unfilled at the end of March was an earlier inquiry by the Argentine State Railways for ten, twelve, or fifteen 4-6-2's and three 2-10-2's for which, it was understood, the Argentine government would request a high priority rating.

Together with 85 steam locomotives ordered in February, and the above-mentioned unfilled inquiries, the 102 steam engines purchased in March will probably rank the current months as one of the most concentrated buying periods in recent steam locomotive history. These orders and inquiries, made despite large backlogs of orders already on builders' books from the carriers—and at a time when the country's steam locomotive building capacity is largely devoted to the completion of recent large government orders—evidences the scope of managerial foresight and preparation for late 1942 and 1943 traffic requirements.

A total of 42 Diesel-electric locomotives were also ordered by the railroads during March, including nine freight engines of 5,400 hp. each and 33 switching engines of 1,000 hp. each. This compares with 79 Diesel-electric units ordered in the preceding month of February and with 95 ordered in March, 1941.

Dominating the list of last month's orders was the Southern Pacific's expenditure of approximately $12,000,000 for 40 steam locomotives and 30 1,000-hp. Diesel-electric switching engines. Included among the steam locomotives were 30 of the road's articulated-consolidation (4-8-8-2) and ten streamlined "Daylight" 4-8-4's. This order duplicated in part 40 articulated-consolidation locomotives and ten Daylight engines ordered by this carrier in the corresponding month of March, 1941, deliveries of which are now under way and are expected to be completed in August. Also outstanding

last month was the Northern Pacific's $6,500,000 purchase of 25 large road locomotives, including ten 4-8-4's, twelve 4-6-6-4's and three 5,400-hp. Diesel-electric freight engines. Other March orders are listed in detail in the accompanying table.

Domestic freight car orders during March declined to 2,863 cars, of which 2,490 were ordered by railroads (70 from company shops and 2,420 from contract car builders), 252 by industrial companies and private car lines and 121 by United States Government departments. Purchases comprised 275 box cars, 1,110 hopper cars, 1,323 gondola cars, 150 tank cars and five armored deck cars.

During the month, the freight car market turned suddenly thin, with one order for 2,000 cars by the Union Pacific accounting for more than half of the cars purchased. More significant, and assuring that this falling-off was but temporary, was the much larger number of cars comprised in inquiries that were unfilled at the end of the month. These included, in part, 100 flat cars for the Santa Fe, 800 hopper cars for the Bessemer & Lake Erie, 50 flat cars for the Central of Georgia, 500 cars of various types for the Chicago, Indianapolis & Louisville, 150 hopper cars for the Rock Island, 1,550 cars of various types for the Denver & Rio Grande Western, 2,000 ore cars for the Duluth, Missabe & Iron Range, 2,000 refrigerator cars for the Pacific Fruit Express, 1,000 gondola cars for the Southern, and 500 box cars for the Texas & Pacific. Other railroads that had not yet entered the market with formal inquiries, but were expected to, included the Elgin, Joliet & Eastern, the Illinois Central and the Lehigh & New England.

The U. S. War Department ordered 16 kitchen cars during the month, marking the first order for passenger-train equipment since the single coach ordered by the Nashville, Chattanooga & St. Louis in November, 1941. Included in export orders reported during the month were 970 freight cars of various types and 20 express-baggage cars placed by the National Railways of Mexico.

Equipment Orders—First Three Months

Volume of railway equipment orders for domestic service placed during the first three months of 1942, together with a comparison with the corresponding three months of 1941, is shown hereunder:

	First three months		Increase or
Locomotives:	1942	1941	Decrease
Steam	202	128	+74
Diesel-electric	131	303	−172
Electric	5	14	−9
Total locos.	338	445	−107
Freight cars	22,660	25,427	−2,767
Passenger cars	16*	200	−184

* Kitchen cars ordered by the War Department.

A further analysis of Diesel-electric locomotive orders placed by railroads, industrial companies and private car lines according to the size of the locomotives ordered follows:

	Diesel-locos.—First three months—1942			
Horsepower:	R. R.'s	Industries	U. S. Gov't.	Total
5,400	21	..	..	21
4,050	5	..	..	5
4,000	2	..	..	2
1,000	57	..	..	57
600 or 660	38	1	..	39
Less than 600	..	4	3	7
Total	123	5	3	131

The 202 steam engines purchased by the railroads during the first quarter represent more than two-thirds the number ordered during the whole of 1941 and are only five fewer engines of this type than were ordered during the whole of 1940. Most significant of the 123 Diesel-electric locomotives ordered during the period are the 26 freight engines (21 of 5,400 hp. and 5 of 4,050 hp.) which compare with a total of 40 Diesel freight locomotives (39 of 5,400 hp. and one of 4,050 hp.) ordered during the whole of 1941. Of the 22,660 freight cars ordered, the railroads placed 21,853 (3,973 with company shops and 17,880 with car builders), industrial companies and private car lines 252 and U. S. Government departments 555. Purchases included 7,127 box cars, 10,560 hopper cars, 3,293 gondola cars, 1,497 flat cars, 150 tank cars, 25 cabooses and eight miscellaneous cars.

Car Orders Confined to 13 Designs

During March the War Production Board's Transportation Equipment Branch, announced that it will hereafter recommend the allocation of freight-car steel only for the construction of cars conforming to the designs and specifications set forth in last fall's report on the Car Construction Committee of the Mechanical Division, Association of American Railroads. This report recommended that, during the emergency, orders for new freight cars conform to 13 designs (reviewed in *Railway Age*, November 15, 1941—page 789). The policy is applicable to all orders placed after the first of this year and to prior orders scheduled for delivery late this year for which materials have not already been processed or received. All car builders are requested to supply each other with necessary drawings and patterns.

Car Building Program Lags Seriously

The freight car deliveries situation during the first three months of 1942 was impaired considerably due to the wide divergence between the promises and performance of the government in making materials available for new car construction. A total of 9,000 cars had been planned for January delivery and a program of 36,000 cars planned for the following three months, February-April, inclusive, for which latter program the WPB granted priorities. Railroad company shops were to deliver 1,500 cars during each of the first four months and contract car builders 7,500 in January, 9,500 in February and 11,000 each in March and April.

Deliveries of railroad company shops are not available, but reliable estimates indicate that about 1,500 cars per month were completed therein during the first quarter. Contract car builders completed 6,240 cars in January, and 7,730 in February, which were 1,260 and 1,770, respectively, fewer than planned. Preliminary estimates of March deliveries by contract builders totaled 7,700 cars, which will be 3,300 fewer than planned. In addition, reports from the field indicate a severe decline in production during the latter part of March with the erection tracks of at least five car builders shut down.

No decision was announced during March concerning the tentative recommendations made by the Office of Defense Transportation to the WPB in February calling for allocation of materials for the construction of 130,000 freight cars during the last eight months of 1942, but it is generally expected that the size of this program will be greatly reduced. Whatever its ultimate size, there is considerable skepticism as to whether the flow of materials to complete it will be any more satisfactory than for the current program.

To plan production efficiently, the car-building industry should have materials 30

Domestic Equipment Orders Reported in Issues of The Railway Age in March 1942

LOCOMOTIVES

Date	Name of Company	No.	Type	Builder
Mar. 7	Northern Pacific	10	4-8-4 Frt. & Pass.	Baldwin Locomotive Works
		12	4-6-6-4 Frt. & Pass.	American Locomotive Co.
		3	Diesel-electric Freight	Electro-Motive Corp.
Mar. 7	Denver & Rio Grande Western	10	4-6-6-4 Frt. & Pass.	Baldwin Locomotive Works
Mar. 7	St. Louis Southwestern	5	4-8-4 Frt. & Pass.	Company Shops
Mar. 14	Denver & Rio Grande Western	6	Diesel-electric Freight	Electro-Motive Corp.
Mar. 14	Delaware & Hudson	15	4-8-4 Frt. & Pass.	American Locomotive Co.
Mar. 21	Southern Pacific	30	4-8-8-2 Pass. & Frt.	Baldwin Locomotive Works
		10	4-8-4 Pass. & Frt.	Lima Locomotive Works
		30	Diesel-electric Sw.	American Locomotive Co.
Mar. 21	Richmond, Fredericksburg & Potomac	10	2-8-4 Frt. & Pass.	Lima Locomotive Works
Mar. 28	Boston & Maine	3	Diesel-electric Sw.	Electro-Motive Corp.

FREIGHT CARS

Mar. 7	U. S. War Dept.	100	Tank	American Car & Foundry
Mar. 7	American Steel & Wire Co.	65	Gondola	Magor
Mar. 7	Richmond, Fredericksburg & Potomac	20	Box	Pullman-Standard
Mar. 7	National Tube Company	98	Gondola	Magor
Mar. 7	Linde Air Products Co.	39	Box	General American
Mar. 7	Rubber Reserve Company	50	Tank	American Car & Foundry
Mar. 7	Nashville, Chattanooga & St. Louis	50	Gondola	Bethlehem Steel Co.
Mar. 14	U. S. War Dept.	16	Storage-box	Pressed Steel Car
Mar. 14	Grand Trunk Western	200	Auto-box	Pressed Steel Car
Mar. 14	Union Pacific	1,000	Ballast	American Car & Foundry
Mar. 14	Central of Georgia	50	Hopper	Pullman-Standard
Mar. 21	Union Pacific	1,000	Gondola	Pullman-Standard
Mar. 21	Chicago, Milwaukee, St. Paul & Pacific	35	Cov. Hopper	Company Shops
		35	Gondola	Company Shops
Mar. 28	Chicago, Rock Island & Pacific	25	Cov. Hopper	General American
Mar. 28	U. S. Navy Dept.	5	Armored Deck	Haffner-Thrall
Mar. 28	Nashville, Chattanooga & St. Louis	75	Gondola	Greenville Steel Car

PASSENGER-TRAIN CARS

Mar. 14	U. S. War Dept.	16	Kitchen	St. Louis Car

to 60 days in advance, and some over-all program is necessary with the materials to complete it definitely set aside and delivered each month.

LOCOMOTIVES

THE WESTERN PACIFIC is inquiring for six steam locomotives of 4-8-4 wheel arrangement.

THE BESSEMER & LAKE ERIE is inquiring for seven steam locomotives, including five of 2-10-4 wheel arrangement and two of 0-8-0 wheel arrangement.

THE BALDWIN LOCOMOTIVE WORKS delivered a total of 62 locomotives, including steam, Diesel-electric and electric engines, to American and foreign railroads, industries and governments during the first three months of 1942. The company had a backlog of 295 locomotives on its books as of March 31, of which 89 represent orders received since January 1. Included in this backlog are 203 steam locomotives and 92 electric or Diesel-electric locomotives. Many of these are for foreign delivery, including railroads in Mexico, Bolivia, Colombia, Chile, Alaska and India. Numerous others are destined for use by American manufacturing and mining companies and by the United States government.

FREIGHT CARS

THE LEHIGH & NEW ENGLAND was erroneously reported to be considering the purchase of new freight cars in the *Railway Age* of March 28.

DIRECTORS OF THE GREAT NORTHERN have authorized the expenditure of $3,500,000 for the purchase of 1,000 ore cars of 75-tons capacity.

THE ILLINOIS CENTRAL is inquiring for 1,000 steel hopper cars of 50 tons' capacity. The directors of this road were reported to have approved a large locomotive and freight car buying program in the *Railway Age* of March 28.

THE NATIONAL RAILWAYS OF MEXICO have ordered 500 50-ton box cars from the American Car & Foundry Co. This brings to 1,470 the number of cars currently purchased, the total orders for which were placed as follows:

500*—50-ton box cars—Magor Car Corporation.
200*—50-ton gondola cars—Magor Car Corporation.
70*—30-cu. yd. air-dump cars—Magor Car Corporation.
200*—50-ton tank cars—American Car & Foundry Co.
500 —50-ton box cars—American Car & Foundry Co.

* *Previously reported.*

SIGNALING

THE READING has placed an order with the General Railway Signal Company covering block signal and interlocking materials to be used between Park Junction, Pa., and Nicetown, between Tabor Junction and Jenkintown, between Lansdale and Bethlehem, between Reading and Gladwyne, and between Trenton and Newton branches. The order includes 243 Type SA searchlight signals, 97 Type G triangular color light signals, 51 Type ME color light dwarfs, 46 Type E horizontal color light signals, instrument cases, switch circuit controllers, transformers, rectifiers and Type K relays.

The Reading has also placed an order with the General Railway Signal Company covering block signal and interlocking materials for a signal rehabilitation program between Reading, Pa., and Lurgan. The order includes 95 Type SA searchlight signals, 22 Type G triangular color light signals, 10 Type E horizontal color light signals, 8 Type ME color light dwarf signals, instrument cases, switch circuit controllers, transformers, copper-oxide rectifiers, time releases, forced down locks and Type K relays.

The Reading has also contracted with the General Railway Signal Company for block signal materials for signaling between Reading, Pa., and Allentown. The order includes 42 Type SA searchlight signals, instrument cases, copper-oxide rectifiers, transformers, switch circuit controllers and Type K relays.

IRON & STEEL

THE MISSOURI PACIFIC has been authorized by the district court to purchase 60,000 tons of rails, of which 15,000 tons of 112-lb. rails will be delivered in 1942 and 45,000 tons of 112-lb. and 90-lb. rails will be delivered in 1943.

February Locomotive Shipments

February shipments of railroad locomotives totaled 100 as compared with 89 in January and 44 in February, 1941, according to reports received by the Department of Commerce's Bureau of the Census from builders other than railroad shops. Shipments for this year's first two months totaled 189 locomotives, compared with 108 in the like 1941 period. The former figure included 47 steam, three electrics, 123 Diesel-electrics, and 16 of other types.

Unfilled orders at the end of February totaled 1,278 locomotives, as compared with 1,199 at the end of January and 515 as of February 28, 1941.

Data supplied by the Car Service Division, Association of American Railroads, on locomotive building in railroad shops show that five locomotives (all steam) were thus produced in February, as compared with a like number (two steam and three electrics) in January and one (steam) in February, 1941. As of March 1 railroad shops had unfilled orders for 34 locomotives, including 18 steam and 16 electrics.

Construction

ILLINOIS CENTRAL.—A contract has been awarded the Ross and White Company, Chicago, for a Red Devil locomotive coaler to be installed at Louisville, Ky.

TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS.—A contract has been awarded the Ross and White Company, Chicago, for a Red Devil locomotive coaler to be installed at St. Louis, Mo.

Supply Trade

The Navy "E" pennant was awarded to the **Ardco Manufacturing Company** in North Bergen, N. J., on March 26; to the **Electric Storage Battery Company** in Philadelphia, Pa., on March 28; and to the **American Car & Foundry Company's** Wilmington, Del., plant on April 2. This coveted emblem, in the form of a blue flag upon which appears a navy anchor and the letter "E," is awarded by the United States Navy for production achievement.

Charles D. Cavett has been appointed advertising and sales promotion manager for the **Cummins Diesel Engine Corporation** of New York.

Hynes Sparks has been appointed vice-president in charge of railway sales of the **Symington-Gould Corporation.** He was formerly manager of eastern sales.

Edward Payson Bullard, III, has been elected vice-president in charge of manufacturing of the **Bullard Company,** makers of machine tools at Bridgeport, Conn. **John A. Bullard,** son of the late A. H. Bullard, who was treasurer of the company, and **J. W. C. Bullard, Jr.,** whose father is vice-president in charge of research, have been elected to the board of directors. E. P. Bullard, III, whose father is president of the firm, was graduated from Yale University in 1932 and attended the Harvard School of Business Administration. He is the designer of the Bullard cut master vertical turret lathe, developed a descaling machine for the Bullard-Dunn metal cleaning process, and has developed and designed many tools for the company and its customers. John A. Bullard, sales engineer for the company, is a graduate of Swarthmore College. At first associated with the Carpenter Steel Company at Reading, Pa., and the Billings & Spencer Co. at Hartford, Conn., he has been with the Bullard Company for 11 years. J. W. C. Bullard, Jr., who graduated from Le-

Edward Payson Bullard, III

high University, is on the staff of the purchasing department.

B. W. Clark, formerly vice-president in charge of the merchandising division, has been appointed vice-president in charge of sales of the **Westinghouse Electric & Manufacturing Co.** He succeeds **Ralph Kelly,** who resigned to become executive vice-president of the Baldwin Locomotive Works (*Railway Age,* March 7). In addition to supervising the sale of apparatus, Mr. Clark will be responsible for co-ordinating all sales of the Westinghouse Company and its subsidiaries. He will transfer his headquarters from Mansfield, Ohio, to Pittsburgh, Pa.

Mr. Clark, who is also president of the Westinghouse Electric Supply Company, attended the University of Michigan. He has been engaged in electrical wholesaling and merchandising for 35 years. In 1906 he joined the Robertson-Cataract Electric Company at Buffalo, N. Y. In 1925 he became a special representative of the Westinghouse Electric Supply Company, and four years later was made general manager. In 1932 he was made vice-president and director, and five years later elected president of the supply company. He was elected vice-president of the Westinghouse Electric & Manufacturing Co., heading its merchandising activities, in January, 1941.

Joseph W. Motherwell, formerly vice-president, treasurer and general manager, has been elected president of the **Ashton Valve Company.** He will continue to hold the office of treasurer. **Henry B. Nickerson,** vice-president, has been elected vice-president and general manager, to succeed Mr. Motherwell.

Joseph W. Motherwell

Mr. Motherwell began his career in 1888 as an apprentice with the Troy Laundry Machine Company, remaining as machinist and tool maker until 1890. He served as machinist and engine erector for the H. W. Caldwell Company from 1891 to 1893 and as erector, field engineer and railroad department salesman for Fairbanks, Morse & Co. from 1893 to 1904. He joined the Ashton Valve Company in 1904, serving as a salesman until 1911 and as vice-president and manager of the railroad department from 1911 to 1921, in which latter year he was elected vice-president, treasurer and general manager.

During his earlier career, Mr. Nickerson had been associated with the American Steam Gage Company from 1898 to 1923; with the American Schaeffer & Budenberg Corporation from 1923 to 1928; and with the Consolidated Ashcroft Hancock Company from 1928 to 1931. He joined the Ashton Valve Company as vice-president in charge of sales in 1931.

Henry B. Nickerson

OBITUARY

David M. Craig, for many years an official of the Koppers Company, died suddenly in his office on March 26. He was 67 years old. Mr. Craig, a graduate of Princeton University, was employed for several years by the Pittsburgh & Western railroad and was also associated with the Pennsylvania railroad as an engineer for 15 years. He joined the Koppers organization as engineer in the construction department in 1915.

TRADE PUBLICATIONS

KINNEAR ROLLING DOORS.—A 40-page catalog describing the complete line of Kinnear rolling doors, rolling grilles, fire doors and shutters, bifolding doors, wood rolling partitions and door operating equipment and accessories has been published by the Kinnear Manufacturing Company, Columbus, Ohio. The catalog is attractively printed and illustrated with numerous photographs and drawings of door installations. Complete specifications, construction details and methods of installing the various types of doors are provided or explained.

LETOURNEAU LITERATURE.—R. G. LeTourneau, Inc., Peoria, Ill., has published a 32-page catalog and three new folders. The catalog describes the complete line of LeTourneau earth-moving equipment, including power-control units, carryall scrapers, Tournapulls, bulldozers, angledozers, rooters, Tournacranes and sheep's foot rollers. The catalog is attractively printed in color and well illustrated with numerous construction photographs. The folders feature correct job methods, LeTourneau equipment in war projects, and various industrial uses for such equipment. They also are well illustrated with actual construction photographs.

Financial

BANGOR & AROOSTOOK.—*Bonds.*—This company has been granted authority by Division 4 of the Interstate Commerce Commission to procure the authentication and delivery of $8,000,000 of consolidated refunding mortgage four per cent gold bonds to be held in its treasury. Details of the purposes for which the issue will be used were set out in the *Railway Age* of March 14, page 569.

BOSTON & MAINE.—*Annual Report.*—The 1941 annual report of this road shows net income, after interest and other charges, of $5,052,194, as compared with a net income of $1,152,197 in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$59,203,411	+$11,605,619
Maintenance of way and structures	7,347,928	+1,545,343
Maintenance of equipment	8,578,288	+1,499,611
Transportation	21,327,700	+2,548,863
TOTAL OPERATING EXPENSES	40,297,472	+6,039,480
Operating ratio	68.07	−3.90
NET REVENUE FROM OPERATIONS	18,905,939	+5,566,139
Railway tax accruals	5,038,031	+1,376,977
Railway operating income	13,867,908	+4,189,162
Net Rents—Dr.	3,375,311	+631,806
NET RAILWAY OPERATING INCOME	10,492,598	+3,557,356
Other income	1,322,005	+161,784
TOTAL INCOME	11,814,603	+3,719,140
Rent for leased roads	1,327,916	+82,910
Interest on funded debt (fixed interest)	3,123,587	−914,545
TOTAL FIXED CHARGES	4,604,525	−1,233,602
NET INCOME	5,052,194	+3,899,996
Disposition of net income:		
Income applied to sinking and other reserve funds	1,161,972	+482,870
Income appropriated for investment in physical property	995,511	.....
Miscellaneous appropriations of income	1,838,810	+1,838,810
TOTAL APPROPRIATIONS OF INCOME	3,996,293	+2,321,680
BALANCE TRANSFERRED TO PROFIT AND LOSS (Credit)	$1,055,901	+$1,578,317

The Boston & Maine paid the largest tax bill in its history in 1941. The road was assessed $5,063,028 in 1941, nearly $1,500,000 more than in 1940. Last year the road also established three new all-time records for operating efficiency. In gross ton miles per train hour the road produced 30,076 in 1941. The report states that "the effort to build up this item of efficiency was begun in the year 1923 when the performance amounted to 10,581."

Another new record was established in the conservation of fuel during the year when only 94 lb. of coal were consumed per 1,000 gross-ton-miles, a decrease of 4.1 per cent under the 1940 figure. In handling its equipment, the road in 1941 increased its average miles per serviceable freight locomotive per day to 106, or 10.3

per cent above the corresponding figure for 1940. In passenger service, the corresponding performance was increased from 124.7 in 1940 to 127.9 in 1941.

BURLINGTON-ROCK ISLAND. — *Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon that portion of its branch line extending northwesterly from Mexia, Tex., to Hubbard, 22.5 miles.

CALIFORNIA WESTERN RAILROAD & NAVIGATION. — *Abandonment.* — This company has asked the Interstate Commerce Commission for authority to abandon its Glen Blair branch extending from Glen Blair Junction, Calif., to Glen Blair, 3.2 miles. Previously, on March 11, 1937, the commission had denied this same application, but the company now informs the commission that the protestants are no longer opposed to the abandonment of the branch line.

CANADIAN NATIONAL.—*Annual Report.*—The 1941 annual report of this company shows net income of $5,438,961 after interest and other charges, as compared with net deficit of $15,384,570 in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$304,376,778	+$56,849,553
Maintenance of way and structures	47,072,688	+7,070,267
Maintenance of equipment	55,148,688	+7,022,300
Transportation	118,081,060	+19,420,888
TOTAL OPERATING EXPENSES	237,768,437	+35,248,624
NET REVENUE FROM OPERATIONS	66,608,341	+21,600,929
Railway tax accruals	6,926,513	+680,557
Railway operating income	59,681,828	+20,920,372
Hire of freight cars —Dr.	3,460,502	+1,249,657
Joint facility rents —Net Dr.	585,569	−11,554
NET RAILWAY OPERATING INCOME	55,626,577	+19,662,169
Other income	12,247,025	+714,056
INCOME AVAILABLE FOR FIXED CHARGES	58,601,315	+20,680,597
Rent for leased roads and equipment	1,499,376	+32,049
Interest on funded debt—Public	44,698,227	−4,003,297
TOTAL FIXED CHARGES	53,162,354	−142,934
NET INCOME	$5,438,961	+$20,823,531

The financial showing above was better than in any previous year in the system's history, it was pointed out by company officers. The cash surplus of the system for 1941, after the payment of taxes and interest paid to the public and the government, was $4,016,000, an improvement of $21,000,000 over 1940. The railroad moved the largest tonnage of freight in its history, transporting the equivalent of 27,199 million tons one mile, an effort 20 per cent greater than in the previous peak of 1928. While passenger revenue increased 47 per cent, passenger miles increased 57 per cent, with an average revenue per passenger mile of 1.8 cents, an all-time low. The C. N. operating ratio was 78.12 per cent, the lowest on record. The report said there is "some shortage of labor, particularly among the shop crafts and shortages of material are bound to occur . . . but these difficulties should not be insurmountable."

CENTRAL OF GEORGIA.—*Abandonment.*—This company would be permitted to abandon a line of railroad extending from Statesboro, Ga., to Metter, 19.5 miles, if Division 4 of the Interstate Commerce Commission adopts a recommended report of its Examiner R. Romero.

CENTRAL OF NEW JERSEY.—*L. C. & N. Trackage.*—Federal Judge Guy L. Fake at Newark, N. J., has set April 9 as the date before which trustees of the Central of New Jersey must affirm or reject the present lease agreement between the railroad and the Lehigh Coal & Navigation Company covering operation of the Lehigh & Susquehanna by the Central. The rent paid for the L. & S. by the latter is approximately $2,700,000 per annum and constitutes a major source of income for the L. C. & N. According to Robert V. White, president of Lehigh, the Navigation company has plans to operate the L. & S. itself if the lease is rejected by the Central. Presumably the Navigation company would place the road in the hands of its subsidiary, the Lehigh & New England, which connects with the L. & S. at several points.

CHESAPEAKE & OHIO. — *Changes in Board of Directors.*—Proxies sent out to stockholders by the Chesapeake & Ohio for election of the board of directors at the annual meeting on April 21 reveal that five new directors are slated to be chosen to replace directors who have resigned or are being dropped from the board. The new directors proposed are William H. Lipscomb, Leesburg, Va.; James M. Nicely of the Guaranty Trust Company, New York; Carl E. Newton, New York; Joseph P. Routh, New York; and Herbert Fitzpatrick, former C. & O. chairman who resigned a year ago. Scheduled to retire from the board are: Frank B. Bernard, Muncie, Ind.; Homer L. Ferguson, Newport News, Va.; John M. Miller, Jr., Richmond, Va.; J. L. Dickinson, Charleston, W. Va.; John B. Hollister, Cincinnati, Ohio; and Ralph C. Gifford, Louisville, Ky. All other members of the existing board, including Brigadier General Leonard P. Ayres, and Allan P. Kirby, who were recently appointed directors to fill vacancies, are slated for re-election.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC. — *Substitution of Equipment in Equipment Trust.*—This company has asked the Interstate Commerce Commission to amend its certificate and order in Finance Docket No. 13216 so as to show that it will purchase six coaches instead of the six parlor cars already authorized. The supplemental application explains that the company has been unable to get priorities on the materials for the parlor cars but feels that it can get them on the coaches. It also declares that the cost of the coaches will be approximately the same as that of the parlor cars, or about $240,000. The original amount of the equipment trust which was authorized early last year was $3,120,000.

COLORADO & SOUTHERN.—*Reorganization.*—This company has filed an application with the Interstate Commerce Commission requesting that a supplemental order be entered in Finance Docket No. 8350 authorizing it to reduce the rate of interest of its general mortgage 4½ per cent gold bonds, series A, of 1980, to four per cent and to provide for their payment at the rate of 1½ per cent per year fixed interest and 2½ per cent per year contingent interest according to the terms of the company's current interest reduction plan now pending before the commission.

DELAWARE & HUDSON.—*Annual Report.*—The 1941 annual report of this road shows net income, after interest and other charges, of $3,024,420, an increase of $2,261,990 as compared with net income in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$34,170,493	+$7,395,183
Maintenance of way	3,510,144	+720,602
Maintenance of equipment	6,240,570	+1,259,727
Transportation	11,460,621	+1,770,432
TOTAL OPERATING EXPENSES	22,767,796	+3,824,336
Operating ratio	66.6	−4.1
NET REVENUE FROM OPERATIONS	11,402,697	+3,570,845
Railway tax accruals	2,337,675	+524,895
Equipment rents—Net Dr.	395,964	+128,125
Joint facility rents—Net Dr.	171,323	+39,350
NET RAILWAY OPERATING INCOME	8,497,736	+2,878,478
Other income	*11,214	−127,018
INCOME AVAILABLE FOR INTEREST, ETC.	8,486,521	+2,751,460
Rent for leased roads	1,756,061	−20,200
Interest on funded debt	1,997,941	−7,059
TOTAL DEDUCTIONS FROM GROSS INCOME	5,462,101	+489,469
NET INCOME	$3,024,420	+$2,261,990

* Deficit.

DELAWARE & HUDSON.—*Bond Maturities.*—That this road may avail itself of the provisions of the Chandler Act (which will probably be re-enacted by Congress) to adjust its obligations with respect to maturity of Delaware & Hudson first and refunding 4's due May 1, 1943, is indicated by President J. H. Nuelle in his annual report to stockholders. Pointing out that this maturity constitutes "the principal financial problem" of the road, he said that the board of managers on November 26 created a committee to study the maturity and recommend a plan to meet it. He promised that "in due course when it is felt to be in the best interest of security holders of this company, a fair and equitable plan to provide for its maturity will be proposed." Of the $50,000,000 issue originally authorized, $47,769,000 is now outstanding in public hands.

Mr. Nuelle also pointed out that the Delaware and Hudson Company and the Delaware & Hudson Railroad Corporation have substantially reduced funded debt during recent years and that both companies are no longer liable for any funded debt, direct or guaranteed, which is not "railroad debt." These companies formerly had large

obligations with respect to coal mines, street railway lines, etc.

DELAWARE, LACKAWANNA & WESTERN.—*Annual Report.*—The 1941 annual report of this road shows net income, after interest and other charges, of $3,671,698, an increase of $3,466,421 as compared with net income in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$61,111,461	+$9,219,385
Maintenance of way	4,568,448	+868,167
Maintenance of equipment	10,493,947	+869,503
Transportation	25,175,907	+1,778,193
TOTAL OPERATING EXPENSES	43,331,771	+3,516,779
NET REVENUE FROM OPERATIONS	17,779,590	+5,702,606
Railway tax accruals	7,161,632	+1,813,307
Railway operating income	10,617,958	+3,889,299
Equipment rents—Net Dr.	600,130	+122,748
Joint facility rents—Net Cr.	107,969	+13,622
NET RAILWAY OPERATING INCOME	10,125,797	+3,780,173
Other income	1,328,733	−56,857
GROSS INCOME	11,454,530	+3,723,317
Rent for leased roads and equipment	7,083,255	.....
Interest on funded debt	223,598	−36,441
TOTAL FIXED CHARGES	7,629,324	+177,098
NET INCOME	$3,671,698	+$3,466,421

DULUTH, MISSABE & IRON RANGE.—*Annual Report.*—The 1941 annual report of this company shows net income of $13,561,652 after interest and other charges, an increase of $2,586,727 as compared with net income in 1940. Selected items from the income statement follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$36,532,417	+$8,977,733
Maintenance of way*	3,052,630	+691,482
Maintenance of equipment	3,368,181	+601,698
Transportation	5,999,320	+1,422,461
TOTAL OPERATING EXPENSES*	12,879,867	+2,722,930
NET REVENUE FROM OPERATIONS*	23,652,551	+6,254,804
Railway tax accruals†	2,677,993	+742,015
NET RAILWAY OPERATING INCOME*	14,437,514	+2,559,300
Other income	324,448	−40,234
GROSS INCOME*	14,761,962	+2,519,066
Rent for leased roads	461	+42
Interest on funded debt	1,006,103	−35,191
TOTAL FIXED CHARGES	1,017,275	−43,448
NET INCOME	$13,561,652	+$2,586,727

* Exclusive of loss on retirement or sale of road amounting to $126,162.05.
† Exclusive of Federal income and excess profits taxes.

FLORIDA EAST COAST.—*Authorized to act for both trustees.*—Scott M. Loftin, co-trustee of the Florida East Coast has been authorized to act for both trustees until such time as a successor to Edward W. Lane, co-trustee who died on March 23, can be appointed.

GREAT NORTHERN.—*Resumption of Operation.*—This company has asked the Interstate Commerce Commission for authority to resume operation of its lines between Kalispell, Mont., and Marion, 23 miles, and between Kalispell, Mont., and Somers, 9.7 miles. At the same time the company requested permission from the commission to purchase or lease from its subsidiary, the Glacier Park Hotel Company, and to operate as a common carrier a 7.3-mile extension southerly from Marion, Mont., which the Somers Lumber Company made subsequent to July 1, 1934, and which the Glacier Park Hotel Company now owns and operates as a part of its private railroad operations.

ILLINOIS CENTRAL.—*Abandonment.*—This company would be authorized to (1) abandon that portion of its Carondelet branch extending from Belleville, Ill., to North Dupo, 10.4 miles; and (2) abandon operation over that portion of the branch from North Dupo, Ill., westwardly to the end of the line near the Mississippi River, 3.2 miles, if Division 4 of the Interstate Commerce Commission adopts a proposed report of its Examiner R. Romero.

LONG ISLAND.—*Annual Report.*—The 1941 annual report of this company shows net loss, after interest and other charges, of $1,290,686, an increase of $74,570 as compared with net loss in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$26,839,398	+$1,610,189
Maintenance of way	2,831,429	+361,881
Maintenance of equipment	4,230,782	+117,388
Transportation	12,036,449	+454,898
TOTAL OPERATING EXPENSES	19,784,572	+1,006,758
Operating ratio	73.7	−0.7
NET REVENUE FROM OPERATIONS	7,054,826	+603,431
Railway tax accruals	4,061,309	+97,618
Railway operating income	2,993,517	+505,813
Hire of equipment—Dr.	1,151,728	+478,533
Joint facility rents—Dr.	1,073,907	+17,288
NET RAILWAY OPERATING INCOME	767,881	+9,993
Other income	336,561	−67,830
GROSS INCOME	1,104,442	−57,836
Rent for leased roads	195,000	+56,250
Interest on funded debt	2,045,534	+42,957
TOTAL DEDUCTIONS FROM GROSS INCOME	2,395,128	+16,734
NET DEFICIT	$1,290,686	+$74,570

MISSOURI PACIFIC.—*Equipment Trust Certificates.*—This company has asked the Interstate Commerce Commission for authority to assume liability for $2,240,000 of equipment trust certificates maturing in 10 equal annual installments of $224,000 on April 15 in each of the years from 1943 to 1952, inclusive. The proceeds will be used as part of the purchase price of new equipment costing a total of $3,749,844 and consisting of 750 50-ton, 40 ft. 6 in. all-steel box cars; 200 50-ton, 50 ft. 6 in. all-steel box cars; 50 50-ton, 50 ft. 6 in. all-steel box cars, equipped with high speed trucks for passenger service; 50 70-ton, 65 ft. all-steel mill type gondola cars; and 50 50-ton, 50 ft. all-steel flat cars.

Equipment Trust Certificates of the St. Louis, Brownsville & Mexico.—The trustee of the Missouri Pacific has asked the commission for authority to permit the St. Louis, Brownsville & Mexico to assume liability for $1,290,000 of equipment trust certificates maturing in 10 equal annual installments of $129,000 on April 15 in each of the years from 1943 to 1952, inclusive. The proceeds will be used as a part of the purchase price of new equipment costing a total of $2,150,551 and consisting of 250 50-ton, 40 ft. 6 in. all-steel box cars; 400 50-ton, 45 ft. steel low side flat bottom gondola cars; and 50 50-ton, 50 ft. all-steel flat cars.

Equipment Trust Certificates of the Missouri-Illinois.—The trustee of the Missouri Pacific has asked the commission for authority to permit the Missouri-Illinois to assume liability for $390,000 of equipment trust certificates, maturing in five equal annual installments of $78,000 on April 15 in each of the years from 1943 to 1947, inclusive. The proceeds will be used as a part of the purchase price of new equipment costing a total of $657,406 and consisting of 100 50-ton, 40 ft. 6 in. all-steel box cars; 50 50-ton, 29 ft. 3 in. all-steel covered hopper cars; and 50 50-ton, 45 ft. all-steel low side flat bottom gondola cars.

Equipment Trust Certificates of the International-Great Northern.—The trustee of the Missouri Pacific has asked the commission for authority to permit the International-Great Northern to assume liability for $630,000 of equipment trust certificates, maturing in 10 equal annual installments of $63,000 on April 15 in each of the years from 1943 to 1952, inclusive. The proceeds will be used as a part of the purchase price of new equipment costing a total of $1,062,886 and consisting of 100 50-ton, 40 ft. 6 in. all-steel box cars; 200 50-ton, 45 ft. all-steel low side flat bottom gondola cars; and 50 50-ton, 50 ft. all-steel flat cars.

NEW YORK CENTRAL.—*Merger of the Dillonvale & Smithfield.*—The Lake Erie, Alliance & Wheeling, a wholly-owned subsidiary of the New York Central, would not be permitted to acquire control of the Dillonvale & Smithfield through the purchase of its stock and the merger of its properties, if Division 4 of the Interstate Commerce Commission adopts a proposed report of its Examiner Lucian Jordan. At the same time Examiner Jordan would deny the New York Central the right to operate the properties of the Dillonvale & Smithfield under lease from the Lake Erie, Alliance & Wheeling. At the present time the line is operated under lease to the New York Central.

"There is nothing of record," writes the examiner, "to show that the proposed acquisition of control and merger would be consistent with the public interest. That the contrary is the fact is indicated by the showing that the vendee proposes, in effect, to pay $200,000 for a line of railroad with an operating life of 10 years, which line may be leased for that period for $100,000. With due allowance for the salvage value, which may be considerably reduced by the

time the line is ready for abandonment, the applicants propose to waste approximately $77,500 in the transaction."

SOUTHERN PACIFIC.—*Abandonment by the Visalia Electric.*—The Visalia Electric has asked the Interstate Commerce Commission for authority to abandon a line extending from El Mirador, Calif., to Strathmore, 4.1 miles.

SOUTHERN PACIFIC.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $5,660,000 of 2½ per cent equipment trust certificates, maturing in 10 equal annual installments of $566,000 on April 1 in each of the years from 1943 to 1952, inclusive. The issue has been sold at 100.009 to Salomon Brothers & Hutzler acting for itself and Dick & Merle-Smith and Stroud & Co., Inc., making the average annual cost to the company approximately 2.5 per cent.

TEXAS & PACIFIC.—*Annual Report.*—The 1941 annual report of this company shows net income of $3,546,001, after interest and other charges, an increase of $1,982,673 as compared with net income in 1940. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$32,839,670	+$6,343,112
Maintenance of way and structures	3,679,083	+602,292
Maintenance of equipment	5,919,896	+869,655
Transportation	9,607,166	+1,206,771
TOTAL OPERATING EXPENSES	21,663,738	+2,883,809
NET REVENUE FROM OPERATIONS	11,175,932	+3,459,304
Railway tax accruals	3,252,111	+1,383,636
Railway operating income	7,923,822	+2,075,668
Net rents	985,745	+13,286
NET RAILWAY OPERATING INCOME	6,938,074	+2,062,382
Other income	524,700	−94,416
TOTAL INCOME	7,462,774	+1,967,966
INCOME AFTER FIXED CHARGES	3,557,701	+1,982,673
NET INCOME	3,546,001	+1,982,673

UNION PACIFIC.—*Abandonment by the Laramie, North Park & Western.*—The Laramie, North Park & Western, a subsidiary of the Union Pacific, would be denied the authority to abandon its entire line extending from Laramie, Wyo., to Coalmont, Colo., 111.4 miles, if Division 4 of the Interstate Commerce Commission adopts a recommended report of its Examiner Jerome K. Lyle.

"The line of the applicant," writes the Examiner, "has not been profitably operated as an independent concern for many years. This fact was known by the Union Pacific when it applied for authority to purchase the capital stock and was recognized by the commission. . . . As previously indicated, the net railway operating income of the applicant considered as an independent carrier for the past six years was substantially the same as that over the five years preceding the acquisition of its stock by the Union Pacific. That carrier never expected that it would receive a return from its investment through dividends. The feeder value of the line was the important consideration. While the feeder value to the parent company has been substantial, it probably has not been as great as expected. It now appears that for the first time since the acquisition of control the traffic to be furnished by the line will be commensurate with that which might have been anticipated. Its operation having been continued through the lean years it should not be abandoned when there is every indication of better financial results, and when the need for rail service is correspondingly increased."

Protestants pointed out to the commission that the line was needed now more than ever due to the fact that the trucking facilities which previously had served this territory would soon go out of existence because of the shortage of rubber. They also testified for the record that there were large deposits of strategic minerals along the line which must be gotten out for the war program.

WABASH.—*Annual Report.*—The 1941 annual report of this road shows net income of $5,532,113, after interest and other charges, an increase of $7,868,012 compared with the 1940 figure. Selected items from the income account follow:

	1941	Increase or Decrease Compared with 1940
RAILWAY OPERATING REVENUES	$57,533,540	+$11,519,870
Maintenance of way	6,889,880	+911,570
Maintenance of equipment	8,371,947	+1,105,790
Transportation—Rail	20,270,706	+2,317,692
TOTAL OPERATING EXPENSES	39,337,305	+4,631,759
NET REVENUE FROM OPERATIONS	18,196,235	+6,888,111
Railway tax accruals	5,110,863	+2,372,272
Railway operating income	13,085,372	+4,515,839
Net rents	3,970,724	−45,465
NET RAILWAY OPERATING INCOME	9,114,649	+4,561,304
Other income	674,003	+38,719
TOTAL INCOME	9,788,652	+4,600,023
Interest charges	3,813,749	−3,263,192
NET INCOME	$5,532,113	+$7,868,012

YOSEMITE VALLEY.—*Reorganization Plan Accepted.*—Division 4 of the Interstate Commerce Commission has certified to the United States district court for the southern district of California that considerably more than the requisite two-thirds of those creditors permitted to vote on the commission's final plan of reorganization for this company have indicated their acceptance of the plan.

Average Prices of Stocks and Bonds

	Mar. 31	Last week	Last year
Average price of 20 representative railway stocks..	24.88	25.93	29.98
Average price of 20 representative railway bonds..	66.68	67.68	65.61

Dividends Declared

Norfolk & Western.—Adjustment Preferred, $1.00, quarterly, payable May 19 to holders of record April 30.

Southern.—Mobile & Ohio Stock Trust Certificates.—$2.00, semi-annually, payable April 1 to holders of record March 26.

Railway Officers

EXECUTIVES

Charles E. Kane, editor of the Illinois Central magazine, has been promoted to executive assistant, a newly created position, with duties pertaining to both the magazine and public relations and with headquarters as before at Chicago. **H. B. Robertson,** associate editor of the Illinois Central magazine, has been advanced to editor, succeeding Mr. Kane.

Dennis Joseph Maley, whose promotion to assistant vice-president on the Erie, with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of March 21, was born at Great Valley, N. Y., on April 23, 1885, and took a business school and commercial course at Salamanca, N. Y. On May 8, 1905, he entered railway service as a shop timekeeper for the Erie at Salamanca and on June 1, 1916, he was

Dennis Joseph Maley

promoted to chief clerk to the superintendent at that point. During the first World War Mr. Maley served in the U. S. Army, returning to his former position on August 1, 1919. On September 16, 1929, he was promoted to trainmaster at Meadville, Pa., and on December 1, 1932, he was advanced to assistant superintendent at Youngstown, Ohio. Mr. Maley was promoted to superintendent of the Kent division on June 16, 1933, and was later transferred successively to the Buffalo and Rochester and the New York Terminal divisions. On November 1, 1939, he was further advanced to assistant general manager, Eastern district, with headquarters at Jersey City, N. J., and was later transferred to the Western district, with headquarters at Youngstown. On July 16, 1941, he was promoted to general manager of the Western district, with the same headquarters, which position he held until his recent promotion, effective March 17.

Gerald E. Duffy, commerce attorney for the Atchison, Topeka & Santa Fe at San Francisco, Cal., has been promoted to assistant to the president, with the same

headquarters, succeeding **John R. Hayden,** who retired from active service on April 1. Mr. Duffy was born at Binghamton, N. Y., on June 16, 1898, and entered railway service in 1915 as a stenographer for the Delaware, Lackawanna & Western, later serving as a stenographer on the Erie at Scranton, Pa. In 1918, he entered Case University at Cleveland, Ohio, and six months later, transferred to George Washington University, Washington, D. C., where he worked for the U. S. Railroad Administration while attending the university. He then became secretary to W. L. McNenimen, member, U. S. Railroad Labor Board at Chicago, where he obtained his law degree from the Kent College of Law in 1921. Mr. Duffy entered the service of the Santa Fe in 1924 as an attorney at Chicago and in 1929 he was promoted to commerce attorney. In 1930 he was transferred to San Francisco.

Mr. Hayden was born at Bennville, Ind., on March 13, 1872, and entered railway service with the St. Louis-San Francisco as a student telegrapher, later serving in the same capacity with other western railroads.

Gerald E. Duffy

In 1894 he became a telegrapher of the Kansas City, Fort Smith & Memphis (now part of the St. Louis-San Francisco), later holding the positions of operator-agent and dispatcher. In 1899, Mr. Hayden went with the Santa Fe as a relief telegrapher at Las Vegas, N. M. For the next several years he held the positions of agent- telegrapher and agent at various points, being sent to Los Angeles, Cal., in 1905 as traveling freight agent. After two years in the latter capacity he was appointed industrial agent and subsequently became assistant industrial commissioner for the system. In May, 1922, he was appointed aspointed assistant traffic manager at San Francisco, and on August 1, 1936, he was promoted to assistant to the president, with the same headquarters.

Leslie B. McDonald, general manager of the Southern Pacific, Pacific lines, with headquarters at San Francisco, Cal., has been promoted to vice-president in charge of operations, with the same headquarters, succeeding **Joseph H. Dyer,** who retired from active service on April 1. Mr. McDonald was born at Wylie, Tex., on August 26, 1883, and after a college education, entered the service of the Texas lines of the Southern Pacific on May 5, 1902, in the accounting department at Victoria, Tex. Subsequently he served in the accounting department at Houston, Tex., then becoming chief clerk to the division engineer and later to the division superintendent. In 1909 Mr. McDonald was advanced to assistant superintendent at Victoria, where he remained until 1912, when he was promoted to superintendent of terminals at Houston. In 1917 he was transferred to the El Paso division, with headquarters at El Paso, Tex., and thence, in 1918, to the Houston division of the Galveston, Harrisburg & San Antonio (now part of the Southern Pacific), with headquarters at San Antonio, Tex. In 1925, he was promoted to assistant general manager of the Texas lines and on March 1, 1930, he was further promoted to general manager. In September, 1937, Mr. McDonald was elected vice-president and general manager of the Lines in Texas and Louisiana and in March, 1938, he was appointed general manager of the Pacific lines, with headquarters at San Francisco.

Leslie B. McDonald

Mr. Dyer was born at Colfax, Cal., on March 13, 1872, and entered railway service in June, 1888, as a section laborer on the Nevada County Narrow Gauge, but went with the Southern Pacific a few months later as a brakeman and was then advanced successively to freight conductor and traveling conductor. In 1902 he was appointed general yardmaster at Sacramento, Cal., and in 1905 he was advanced to trainmaster. Mr. Dyer was promoted to superintendent of the Shasta division in 1908, and was transferred to the Tucson division in 1911 and to the Sacramento division in 1914. In 1916 he was advanced to assistant general manager and in 1918 he was promoted to general manager of the Pacific lines, with headquarters at San Francisco. In 1929 he was elected vice-president in charge of operations, which position he held until his retirement. Mr. Dyer has also been president of the Ogden Union Railway Company since 1929 and is a director of the Southern Pacific Golden Gate Company, the Sunset Railway Company, the Northwestern Pacific, the Golden Gate Ferries, Ltd., and the Southern Pacific Railroad of Mexico.

Joseph H. Dyer

FINANCIAL, LEGAL AND ACCOUNTING

H. J. Peterson, assistant auditor of freight accounts of the Union Pacific at Omaha, Neb., has been promoted to auditor of freight accounts, succeeding **James W. White,** who retired from active service on March 31. **R. M. Sutton,** assistant auditor of disbursements, has been advanced to auditor of general and stations accounts and **F. D. Whelan,** assistant chief clerk in the disbursements accounting department, has been promoted to assistant auditor of disbursements, succeeding Mr. Sutton.

Medard Kerr, assistant to the executive vice-president of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., has been appointed local treasurer of the Southern Pacific Company, with headquarters at San Francisco, Cal., succeeding **Clarence M. Scott,** who retired from active service on April 1. **P. J. Kendall,** auditor of miscellaneous accounts of the Southern Pacific, Pacific lines, has been promoted to assistant general auditor, a newly created position, with headquarters at San Francisco.

Mr. Scott was born in Hamilton county, Ohio, on April 10, 1872, and from February, 1889, to March, 1892, was manager of the Western Union telegraph office at Seymour, Ind. On the latter date, he entered railway service as a telegraph operator on the Ohio & Mississippi (now the Baltimore & Ohio) at Seymour, later serving as secretary to the trainmaster and dispatcher. In February, 1896, he went with the Santa Fe, Prescott & Phoenix (now part of the Atchison, Topeka & Santa Fe) as secretary to the general freight and passenger agent at Prescott, Ariz., later serving as stenographer and clerk in various capacities in the office of the general manager and chief engineer. In August, 1905, Mr. Scott went with the Arizona Eastern (now owned by the Southern Pacific) as secretary and chief clerk to the president, with headquarters at Tucson, Ariz., and two years later he was advanced to superintendent of the Phoenix division. During the period of federal control of the railroads, Mr. Scott served as

federal manager of the Arizona Eastern and in March, 1920, he was appointed general manager. Two years later Mr. Scott was elected vice-president and general manager, and in October, 1924, he became assistant treasurer of the Southern Pacific Company, with headquarters at San Francisco. His title was changed to local treasurer on January 1, 1929, which position he held until his retirement.

OPERATING

J. V. Hughes has been appointed trainmaster of the Hudson and Mohawk divisions of the New York Central at Albany, N. Y.

C. D. Haupt, trainmaster on the St. Louis division of the Pennsylvania at Terre Haute, Ind., has been appointed night trainmaster on the Philadelphia Terminal division.

Elmer L. Anderson, division engineer on the St. Louis-San Francisco at Springfield, Mo., has been promoted to assistant to the general manager, with the same headquarters.

G. O. Armstrong, transportation inspector on the Illinois Central at Chicago, has been promoted to trainmaster at La Salle, Ill., succeeding **E. C. Blanford,** who has been granted a leave of absence because of illness.

William A. Wood, general manager of the New York, Ontario & Western, with headquarters at Middletown, N. Y., retired from active service on April 1. The office of general manager has been abolished.

J. W. Smith, trainmaster on the Seaboard Air Line at Richmond, Va., has been promoted to assistant superintendent of the Virginia division, with headquarters at Richmond, Va. **O. C. Bledsoe,** assistant terminal trainmaster at Richmond, has been appointed terminal trainmaster at Richmond, succeeding **J. R. Thorne,** who succeeds Mr. Smith.

James R. Branley, who resigned as general superintendent of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minneapolis, Minn., on August 1, 1941, and who later served a short time as assistant superintendent on the Chicago, Rock Island & Pacific at Little Rock, Ark., has been appointed general manager of the Minneapolis, Northfield & Southern, with headquarters at Minneapolis, Minn., succeeding **James M. Baths,** whose appointment as deputy associate director of the Office of Defense Transportation, Division of Railway Transport, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of March 7.

Harold V. Bordwell, whose promotion to assistant general manager of the Western district of the Erie, with headquarters at Youngstown, Ohio, was reported in the *Railway Age* of March 21, was born at Alden, N. Y., on July 16, 1899, and entered railway service on January 13, 1919, as a yard clerk on the Erie at East Buffalo, N. Y. On September 1, 1922, he was promoted to assistant chief clerk and on October 1, 1926, he was advanced to yardmaster, serving in the latter capacity at various locations. On June 1,

Harold V. Bordwell

1934, Mr. Bordwell was promoted to trainmaster and served in that capacity at various locations. On March 1, 1940, he was advanced to assistant superintendent at Chicago. He was promoted to superintendent, with headquarters at Huntington, Ind., on February 16, 1941, later being transferred to Marion, Ohio, where he was located at the time of his recent promotion.

Vincent J. McMullen, whose promotion to superintendent of the Kent division of the Erie, with headquarters at Marion, Ohio, was reported in the *Railway Age* of March 21, was born at Buffalo, N. Y., on July 23, 1898, and attended Canisius college. Mr. McMullen entered railway service on September 15, 1917, as an electrician in the Buffalo car shop of the Erie and on February 9, 1922, was promoted to inspector in the car department, serving in

Vincent J. McMullen

that capacity at various locations. On October 22, 1928, he was promoted to foreman on the Mahoning division, and on October 1, 1934, he was advanced to division car foreman at Cleveland, Ohio. Mr. McMullen transferred to the operating department on August 10, 1937, as inspector of operation at Cleveland, and on October 22, 1937, he was promoted to trainmaster, serving at various locations. On February 16, 1941, he was promoted to assistant superintendent at Chicago, which position he held until his recent promotion.

S. Hammer, assistant superintendent on the Memphis division of the Missouri Pacific, with headquarters at Wynne, Ark., has been promoted to superintendent of the Missouri and Memphis divisions and the Missouri-Illinois Railroad, west of the Mississippi river, with headquarters at Poplar Bluff, Mo., succeeding **Clyde W. Pace,** who has been transferred to the Eastern and Kansas City Terminal divisions, with headquarters at Kansas City, Mo., relieving **Charles F. Dougherty,** who has been called to military service. **R. M. Smith,** trainmaster at Bush, Ill., has been advanced to assistant superintendent at Wynne, replacing Mr. Hammer, and **M. F. Weeks** has been appointed trainmaster at Bush, succeeding Mr. Smith.

Charles H. Longman, assistant to the chief operating officer of the Chicago & North Western, has been promoted to assistant chief operating officer, with head-

Charles H. Longman

quarters as before at Chicago. Mr. Longman was born in Chicago on April 4, 1893, and entered railway service on May 22, 1907, as a clerk on the Chicago & North Western. In the following year he became a locomotive fireman and four years later an engineman. In 1926, he was promoted to road foreman of engines in the Chicago terminals and three years later was made supervisor of safety at Chicago. For seven months in 1932, he again served as an engineman in the Chicago terminal, and from October, 1932, to November, 1933, as trainmaster at Boone, Ia. On the latter date he was transferred to Chicago, which position he held until February 21, 1934, when he was promoted to assistant to the general manager. On December 1, 1934, he was promoted to assistant to the vice-president and general manager, and on July 1, 1937, he was advanced to assistant general manager. In 1940, Mr. Longman was appointed assistant to the chief operating officer.

W. S. Alcumbrac, assistant superintendent of the Iowa division of the Chicago & North Western, with headquarters at Sioux City, Iowa, has been promoted

to superintendent of the Dakota division, with headquarters at Huron, S. D., succeeding **H. S. Smith,** who has been transferred to the Madison division, with headquarters at Madison, Wis., relieving **Elmer Terrill,** who has been transferred to the Iowa division, with headquarters at Boone, Iowa. Mr. Terrill replaces **L. B. Kendall,** who has been transferred to the Galena division, with headquarters at Chicago, succeeding **Henry A. Parish,** who has been transferred to the Wisconsin division, with the same headquarters, replacing **Henry R. Koch,** whose death on March 15 was reported in the *Railway Age* of March 21. **W. L. Mueller,** assistant superintendent at Casper, Wyo., has been transferred to Sioux City, relieving Mr. Alcumbrac, and **A. H. Warring,** trainmaster at Fremont, Neb., has been advanced to assistant superintendent at Casper, succeeding Mr. Mueller. **B. R. Meyers,** trainmaster at Mason City, Iowa, has been transferred to Council Bluffs, Iowa, succeeding **J. R. Chandler,** who has retired from active service, and **W. F. Leske,** assistant trainmaster on the Black Hills division, has been promoted to trainmaster at Mason City, replacing Mr. Meyers. **L. C. Reynolds,** division storekeeper at Chadron, Neb., has been appointed trainmaster at Fremont, Neb., succeeding Mr. Warring.

Adolph E. Kriesien, whose promotion to general manager of the Western district of the Erie, with headquarters at Youngstown, Ohio, was reported in the *Railway Age* of March 21, was born at Paterson, N. J., on August 19, 1902, and attended a technical school at Newark, N. J. Mr. Kriesien entered railway service in July, 1920, as a rodman on the Erie at Youngstown, later being promoted successively to levelman, transitman and head of corps. On July 1, 1928, he was promoted to assistant division engineer of the New York Terminal division at Jersey City, N. J., and on November 16, 1933, he was appointed inspector of transportation at Cleve-

Adolph E. Kriesien

land, Ohio. Mr. Kriesien was promoted to trainmaster at Dunmore, Pa., on May 9, 1934, later being transferred successively to Jersey City and to Marion, Ohio. On February 1, 1938, he was promoted to superintendent of the New York Terminal division at Jersey City, later being transferred successively to Buffalo, N. Y., and Salamanca, N. Y. On October 16, 1940, Mr. Kriesien was promoted to assistant general manager of the Eastern district, with headquarters at Jersey City, which position he held until his recent promotion, effective March 17.

Charles F. Donnatin, assistant general manager of the Southern Pacific, Pacific lines, with headquarters at San Francisco, Cal., has been promoted to general manager, with the same headquarters, succeeding **Leslie B. McDonald,** whose promotion to vice-president in charge of operations is reported elsewhere in these columns. **James W. Corbett,** superintendent of the Portland division, with headquarters at Portland, Ore., has been advanced to assistant general manager at San Francisco, relieving Mr. Donnatin, and **M. L. Jennings,** superintendent of the San Joaquin division at Bakersfield, Cal., has been transferred to Portland, replacing Mr. Corbett. **B. W. Mitchell,** assistant superintendent at Los Angeles, Cal., has been advanced to superintendent at Bakersfield, succeeding Mr. Jennings. **W. B. Kirkland,** superintendent of transportation, has been promoted to general superintendent of transportation, with headquarters as before at San Francisco. A biography and photograph of Mr. Corbett were published in the *Railway Age* of July 26, 1941, shortly following his promotion to superintendent at Portland.

TRAFFIC

The Virginian has removed its New York freight office from 230 Park avenue to Room 1109, 44 Wall Street.

Adrien R. Burnett, chief clerk in the traffic department of the St. Louis Southwestern at Tyler, Tex., has been promoted to assistant general freight agent at that point, a newly created position.

James R. McClurken, assistant general freight agent for the Kansas City Southern-Louisiana & Arkansas Lines at St. Louis, Mo., has been promoted to general freight agent, with the same headquarters.

James C. Cooke, assistant foreign passenger agent of the Pennsylvania, has been promoted to foreign passenger agent, with headquarters as before at New York, succeeding **Henry Opperman, Jr.,** deceased. **V. E. Woodward,** city ticket agent, has been appointed assistant foreign passenger agent, to succeed Mr. Cooke.

R. E. King, district freight and passenger agent for the Chicago, Rock Island & Pacific at Indianapolis, Ind., has been promoted to general agent, passenger department, at Detroit, Mich., succeeding **C. P. Bradley,** who has been transferred to New York, replacing **M. L. Mowry,** who retired on April 1. **Robert Voigtmann,** traveling freight and passenger agent at Boston, Mass., has been advanced to district freight and passenger agent at Indianapolis, relieving Mr. King.

Charles F. McTague, general freight traffic manager of the Delaware, Lackawanna & Western at New York, retired on April 1, as reported in the *Railway Age* of March 28.

Mr. McTague was born at Galt, Ont., Canada, and started his railroad career in the fall of 1892 as a clerk in the office of the local agent of the Canadian Pacific. In June, 1893, he entered the employ of the Michigan Central at Buffalo,

Charles F. McTague

N. Y., as a clerk in the office of the division freight agent. In September, 1899, he became chief clerk to the general eastern freight agent of the Lackawanna at New York and in June, 1903, he was promoted to contracting freight agent. Mr. McTague was appointed commercial agent at Cleveland, Ohio, on December 1, 1905, and in July, 1909, he was promoted to general eastern freight agent at New York, being transferred to Buffalo the following November as assistant general freight agent. In July, 1924, he returned to New York as general foreign freight agent. He was promoted to freight traffic manager on April 15, 1929, and to general freight traffic manager on May 1, 1935. Upon organization of the Traffic Club of New York in August, 1906, Mr. McTague became a charter member.

ENGINEERING & SIGNALING

J. M. Giles, supervisor of bridges and buildings on the Missouri Pacific at St. Louis, Mo., has been promoted to division engineer, with headquarters at Wichita, Kan., succeeding **E. B. Fithian,** who retired from active service on April 1.

C. F. Thomas, resident engineer of the Spokane, Portland & Seattle, with headquarters at Portland, Ore., has been appointed office engineer, with the same headquarters, a newly created position, and **L. K. Needham,** roadmaster at Portland, has been promoted to resident engineer, succeeding Mr. Thomas.

John P. Cronin, whose promotion to engineer of design of the Boston & Maine, with headquarters at Boston, Mass., was announced in the *Railway Age* of March 21, was born on June 28, 1888, at Worcester, Mass. Mr. Cronin received his higher education at the University of Maine, graduating with a Bachelor of Science degree in 1912. He entered railway service with

the B. & M. on June 24 of that year as a draftsman, retaining this position until October, 1917, when he entered the army, serving with the A. E. F. in the 170th Aero squadron. In June, 1919, Mr. Cronin returned to the B. & M. as a draftsman, being advanced to general draftsman on October 1, 1920. On April 16, 1928,

John P. Cronin

he was promoted to assistant engineer, and on February 16, 1929, he became office engineer in the office of the chief engineer. He was holding this latter position at the time of his recent promotion to engineer of design, which became effective on March 16.

Harold W. Legro, whose appointment as engineer of grade crossings of the Boston & Maine, with headquarters at Boston, Mass., was reported in the *Railway Age* of March 21, was born on November 25, 1888, at Lynn, Mass. Following a public school education, Mr. Legro studied engineering by means of various special courses. On June 3, 1907, he entered railway service with the B. & M. as a rod-

Harold W. Legro

man, serving in this capacity and as transitman, inspector and instrumentman until January 1, 1918. At that time he became assistant track supervisor, holding this position until January 15, 1921, when he was appointed assistant division engineer of the Portland division. On January 16, 1928, he became acting supervisor of bridges and buildings on the same division, holding this position until February 1, 1928, when he became industrial engineer at Boston. When this position was abolished on February 1, 1939, Mr. Legro became assistant division engineer of the Terminal division at Boston. He was holding this latter position at the time of his appointment as engineer of grade crossings, which became effective on March 16.

Henry C. Archibald, who has been appointed assistant to the chief engineer of the Boston & Maine, with headquarters at Boston, Mass., as reported in the *Railway Age* of March 21, was born on July 26, 1891, at Everett, Mass. He was educated at the Tufts College engineering school, graduating in 1915, and entered the service of the B. & M. on June 15 of that year as a structural draftsman. From 1917 to 1919, Mr. Archibald served with the A. E. F. in France, returning to the B. & M. at the end of this period as structural draftsman. In 1925, he was appointed supervisor of bridges and buildings, and in 1928 he was advanced to assistant division engineer, being further promoted to division

Henry C. Archibald

engineer in 1929. On November 15, 1941, Mr. Archibald became acting engineer of track, which position he was holding at the time of his recent appointment as assistant to the chief engineer, which was effective on March 16.

John Schofield, whose appointment as chief architect of the Canadian National at Montreal, Que., was reported in the *Railway Age* of March 28, has been with the Canadian National for 35 years. He was born in Monaghan, Ireland, where he served an architectural apprenticeship. After further studies in Dublin, Mr. Schofield went to Canada in 1904, subsequently entering the service of the Canadian Northern (now Canadian National). In 1923 he was appointed architect for the Canadian National and with the formation of Trans-Canada Air Lines in 1937 he was also appointed architect for that organization. Since the commencement of the war his services have also been utilized by the Department of Transport and the Department of Munitions and Supply; the British Ministry of Aircraft Production and the Royal Air Force Ferry Command. Railway stations designed by Mr. Schofield have been erected at Hamilton, Ont., and London, St. John, N. B.; Halifax, N. S.; Edmonton, Alta.; Saskatoon, Sask.; Niagara Falls, Ont., and Jasper, Alta. At Montreal, Que., he is responsible for the design and construction of the new Terminal station. He has also designed shops

John Schofield

at Montreal, express sheds at Montreal and Toronto, Ont., and fruit warehouses, telegraph buildings and telegraph offices in various parts of Canada. He has been associated in many Canadian National hotel developments, including the resorts in Jasper National Park, Minaki Lodge in the Lake of the Woods district and hotels at Halifax, Saskatoon, Vancouver and Charlottetown, P. E. I. He is a member of the Royal Architectural Institute of Canada and the Quebec Province Association of Architects.

J. A. Beoddy, assistant superintendent of signals of the Norfolk & Western, has been promoted to superintendent of telegraph and signals, with headquarters as before at Roanoke, Va., succeeding **D. W. Richards,** who retired on April 1, after

J. A. Beoddy

42 years of continuous service. **A. B. Armistead,** inspector of telephones, telegraph and signals, has been promoted to assistant superintendent of signals, at Roanoke, to succeed Mr. Beoddy.

Mr. Beoddy was born in Madison County, Ohio, and was educated in the public

(*Continued on page 734*)

Canadian Pacific Railway Company

SIXTY-FIRST ANNUAL REPORT

OF THE

DIRECTORS OF CANADIAN PACIFIC RAILWAY COMPANY

YEAR ENDED DECEMBER 31, 1941

To the Shareholders:

The accounts of the Company for the year ended December 31, 1941, show the following results:—

Income Account

Gross Earnings		$221,446,053
Working Expenses (including taxes)		175,488,517
Net Earnings		$45,957,536
Other Income		13,382,059
		$59,339,595
Fixed Charges	$24,228,698	
Interest on bonds of Minneapolis, St. Paul & Sault Ste. Marie Railway Company, guaranteed as to interest by your Company	749,465	
		24,978,163
Net Income		$34,361,432
Dividends on Preference Stock:		
2% paid August 1, 1941—£564,070	$2,521,391	
2% payable February 2, 1942—£564,070	2,521,391	
		5,042,782
Balance transferred to Profit and Loss Account		$29,318,650

Profit and Loss Account

Profit and Loss Balance December 31, 1940		$144,045,295
Balance of Income Account for the year ended December 31, 1941		29,318,650
		$173,363,945
DEDUCT:		
Loss on lines abandoned and on property retired and not replaced	$649,076	
Exchange adjustment in respect of steamship insurance recovered in sterling	1,670,032	
Miscellaneous—Net Debit	658,901	
		2,978,009
Profit and Loss Balance December 31, 1941, as per Balance Sheet		$170,385,936

Net Income for the year amounted to $34,361,432, being $14,216,376 greater than in 1940.

Railway Earnings and Expenses

The comparative results of railway operations were as follows:

	1941	1940	Increase or *Decrease*
Gross Earnings	$221,446,053	$170,964,897	$50,481,156
Working Expenses (including taxes)	175,488,517	135,325,459	40,163,058
Net Earnings	$45,957,536	$35,639,438	$10,318,098
Expense ratios:			
Including taxes	79.25%	79.15%	.10
Excluding taxes	71.65%	74.61%	*2.96*

Gross earnings increased by $50,481,156, or 29.5%. The substantial increases occurring in the earlier months, as a result both of rising wartime activity and the delayed movement of the 1940 wheat crop, continued to the close of the year, even though the final quarter of 1940 had been a period of relatively heavy traffic.

Freight Earnings increased by $41,569,461, or 30.6%. They were exceeded only in 1928, when the greatest grain movement in the history of your Company occurred. The volume of freight traffic was greater than that of any previous year, amounting to 22,376 million ton miles, 21.5% above the 1928 peak of 18,423 million. The average revenue per ton mile dropped to 0.79 cents, the lowest since 1917.

Apart from grain and grain products, freight earnings reached a record level, with a gain over last year of 28.1%. This was almost entirely the result of the conversion of the national economy to a wartime basis. Increases took place in every major commodity group, the most striking being in manufactured goods, lumber and bituminous coal.

Earnings from grain and grain products increased by $11,147,124, or 40.2%. The volume of grain handled was 215 million bushels, compared with 166 million bushels in 1940. This was considerably more than the average of 155 million bushels for the ten years 1931-40, which included a period of severe drought, but was well below the average of 254 million bushels for the five years 1925-29. The increase for the year resulted from larger export clearances and additional storage capacity at the head of the Great Lakes and other terminal ports, which made possible the movement of large quantities of grain from Prairie points.

The Prairie wheat crop amounted to 279 million bushels, as against 514 million in 1940, a decrease of about 45%. However, as a result of the large carry-over from the previous crop, it is estimated that the stock of wheat available for movement from the Prairie Provinces at the close of the year was only 25% less than in 1940.

Passenger Earnings increased by $6,895,040, or 37.5%, and were the highest since 1930. Traffic throughout the Dominion was very heavy, particularly on your Company's transcontinental line. The average passenger journey was the longest yet recorded, rising to 144 miles as compared with 119 miles in 1940. However, the low rates in effect for members of the armed forces, both on duty and on furlough, caused a reduction in the average revenue per passenger mile to 1.91 cents, as against 1.97 cents in 1940, the lowest since 1916.

Other Earnings increased by $2,016,655, or 12.0%. The largest increases occurred in sleeping and dining car and news services. Net payments for hire of equipment amounted to $382,296 as compared with net receipts of $89,390 in 1940.

Working Expenses increased by $40,163,058, or 29.7%. Exclusive of taxes the increase was $31,095,766, or 61.6% of the increase in gross earnings. The wartime cost-of-living bonus paid to employees under various Dominion Orders-in-Council amounted to approximately $4,500,000. The first cost-of-living bonus was made effective on June 1 under Order-in-Council P. C. 7440, as amended by P. C. 4643, being at the rate of $1.93 per week. On September 1 the rate was increased under these orders to $3.20 per week, and on November 16, under Order-in-Council P. C. 8253, to $3.65 per week. The last mentioned rate, if maintained, will involve an annual expenditure by your Company of more than $10,000,000. The ratio of working expenses (excluding taxes) to gross earnings was 71.65%, as compared with 74.61% in 1940, and was the lowest since 1917.

Maintenance of Way and Structures Expenses increased by $7,835,672. During the year 1,546,175 treated and 1,438,836 untreated ties were placed in track and 249 single track miles of new rail were laid. Tie plates to the number of 2,137,550 and rail anchors to the number of 790,380 were installed. Testing of rails for invisible defects by Sperry detector car was continued. These cars traversed more than 5,000 miles of track during the year, and all defective rails indicated were removed. The unprecedentedly heavy traffic now being handled and the desirability in the national interest of curtailing the demand for labour and materials in order to avoid interference with the war effort made it advisable to limit the work of maintenance of track and structures to that required for safe operation. Consequently, it was deemed desirable to anticipate maintenance expenditures that will become necessary in the post-war period by including in the expenses for 1941 an amount of $3,500,000 to create a special renewal reserve equal to the difference between the actual expenditure and that which would have been made under similar traffic conditions in peacetime.

Maintenance of Equipment Expenses increased by $7,611,509. Locomotive repairs involved an expenditure of $10,132,262, and included the shopping of 614 engines for heavy repairs. Nine locomotive boilers and seventeen tenders were replaced and automatic stokers were installed in thirty engines. Expenditures for freight car repairs amounted to $9,406,014. The programme for the year included heavy repairs to 23,827 cars and application of cast steel truck side frames to 3,525 cars. Passenger

[Advertisement]

train car repairs involved an expenditure of $5,957,948. General overhauling of 1,387 cars was effected during the year. To meet the demands of traffic ten lounge and five compartment cars were converted into other classes of sleeping and parlor cars and air-conditioned. Steel centre sills and other improvements were installed in six baggage and express cars. At the end of 1941, 92.3% of locomotives and 98.0% of freight cars were in serviceable condition, as compared with 89.5% and 96.0%, respectively, the previous year. Charges for depreciation of rolling stock on the basis of use amounted to $12,700,602, as compared with $10,317,760 in 1940.

Transportation Expenses increased by $14,152,798. In spite of higher labour, fuel and material costs, the ratio of transportation expenses to gross earnings was the lowest on record, being 32.62% as against 33.97% in 1940. Although the special traffic conditions made unprecedented demands on rolling stock and facilities, a high degree of efficiency was maintained, as indicated by the following comparisons:

	1941	1940
Freight train load—gross tons	1,759	1,747
Freight train fuel consumption—pounds per 1,000 gross ton miles	98	97
Freight train speed—miles per hour	17.2	17.5
Freight car movement—miles per car day	46.20	36.13
Freight car load—tons	31.86	30.12
Gross ton miles per freight train hour	30,312	30,653
Revenue passenger miles per train mile	74.33	55.67

Other Working Expenses increased by a net amount of $10,563,079, of which $9,067,292 was attributable to higher taxes. Railway tax accruals of $16,833,158, including $12,400,000 for Dominion income and excess profits taxes, were by far the highest on record, absorbing 7.6% of the gross earnings and being equivalent to almost one-half of the net income for the year. These tax accruals do not include excise and sales taxes or customs duties, which though charged to working expenses are not segregated.

Other Income

Other income amounted to $13,382,059, an increase of $2,689,895, or 25.2%.

Dividend income increased by $342,672. Dividends paid by The Consolidated Mining and Smelting Company of Canada, Limited, were at the rate of $2.50 per share, compared with $2.25 in 1940, which resulted in an increase of $420,625 in the amount received by your Company.

Net income from interest, exchange, separately operated properties and miscellaneous sources increased by $2,253,202. Interest received on deferred payments on land contracts was greater, and income from the Steamship Replacement Fund was accrued for a full year for the first time. The net of receipts and payments in currencies other than Canadian during the year resulted in an increase in income from exchange.

Net earnings of ocean and coastal steamships amounted to $2,788,297, a decrease of $287,612. Agreement was reached on certain details of hire for requisitioned vessels which were still unsettled at the close of 1940. The present year's accounts include an amount of $1,319,969, representing additional earnings for the previous year over and above the amount, partly estimated, which was shown in the last Annual Report. The decreased net earnings for the year are accounted for by the fact that fewer ocean vessels were in operation. Coastal steamship operations resulted in an increase in net earnings of $387,628.

Net earnings of hotel, communication and miscellaneous properties increased by $381,634. Every hotel reported improved earnings, and the total increase amounted to $367,228. The increase in communication earnings was $266,579, accounted for largely by gains in ordinary commercial telegraph transmissions and telegraph tolls on cable messages. There was a decrease of $252,173 in earnings of miscellaneous properties.

Fixed Charges and Guaranteed Interest

Fixed charges decreased by $1,152,018. The principal reductions resulted from the retirement without refunding of the Twenty Year 4½% Sinking Fund Secured Note Certificates and of substantial amounts of the Collateral Trust Bonds and Serial Secured Notes.

The amount charged to income on account of guaranteed interest on Soo Line bonds was reduced from $805,830 in 1940 to $749,465, as a result of the discontinuance of the practice of computing interest accruals on the bonds held by your Company. Heretofore this interest has been taken up through Other Income, so that the change in accounting has no effect on Net Income.

Dividends

Dividends amounting to $5,042,782, being at the rate of 4% on the non-cumulative Preference Stock, were declared out of the Net Income for the year.

After careful consideration it was decided not to declare any dividend for the year 1941 on the Ordinary Capital Stock. In reaching this decision your Directors are of the opinion that greater benefit will inure to the shareholders through the further strengthening of the financial resources of your Company than from a disbursement of current income. The increase in earnings during the last two years has been due almost entirely to wartime activity and cannot be depended upon as a true indication of future results. The shareholders' equity will continue to be enhanced to the extent that capital expenditures and maturing obligations are met without recourse to new financing, and your Company will be in a better position to meet the unpredictable conditions of the post-war period, which may require extensive changes in facilities and services.

Profit and Loss Account

The balance of income account transferred to profit and loss amounted to $29,318,650, as compared with $15,102,274 in 1940.

Loss on lines abandoned and on property retired and not replaced amounted to $649,076. Three sections of branch line in the Province of Quebec were abandoned during the year, viz., Mando to Point Fortune, 6.8 miles, Kingsbury to Windsor Mills, 9.3 miles, and Eastman to Peasley's Siding, 6.8 miles.

The profit and loss balance at the close of the year was higher by $26,340,641 than at the end of 1940.

Land Accounts

During the year 89,449 acres of agricultural lands were sold for $569,717, an average price of $6.37 per acre. Included in this total were 200 acres of irrigated land, sold at an average price of $39.94 per acre.

Cash received on land account totalled $2,856,347, including $498,599 for petroleum rights, coal land rents and royalties, and gas royalties. Disbursements for land and irrigation expenses, including taxes, were $1,297,419, leaving net cash receipts of $1,558,928. This was an improvement of $356,614 over the previous year.

Continuing the policy of rendering assistance to farmers in the Western Provinces who have suffered through adverse conditions, your Company extended to the current crop year the same rebates of interest and other concessions as were granted in 1940. The total amount of assistance to holders of farm contracts since 1932 has been $18,130,562.

Balance Sheet

The General Balance Sheet is presented with its supporting schedules in its customary form. For clarity and brevity all amounts have been shown in even dollars.

The net increase in Property Investment during the year amounted to $5,515,477.

Owing to increased insurance risk resulting from wartime conditions, it was decided to retain in the Insurance Fund the excess of premiums and investment income over losses sustained during the year. As a result, the Insurance Fund and Insurance Reserve were increased by $740,835.

The Steamship Replacement Fund was augmented by further amounts recoverable as insurance on vessels lost through enemy action during the year and by interest earned by the fund.

The excess of Current Assets over Current Liabilities was $57,909,423, or $7,630,457 greater than at the end of the previous year. The increased amount of income and excess profits taxes unpaid, together with the provision for redemption of outstanding Twenty Year 4½% Secured Note Certificates, which were called on June 15, account for the increase of $10,190,120 in Other Current Liabilities.

Miscellaneous Accounts Payable include $980,940 which was paid to the Dominion Government on January 2, 1942. Of this amount $110,940 was the final instalment on the 2½% loan under the Unemployment Relief and Assistance Act, 1936, and

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$100,000 the current instalment and $770,000 the entire unpaid balance of the 4% loan under the Supplementary Public Works Construction Act, 1935, which was repayable serially to 1950.

Finance

Serial 3% Collateral Trust Bonds to the amount of $1,000,000 were redeemed, and 3% Collateral Trust Bonds due 1945 to the amount of $2,000,000 and 6% Collateral Trust Bonds due 1942 to the amount of $223,000 were purchased and cancelled. Consolidated Debenture Stock to the amount of $3,953,200, pledged as collateral to these bonds, was released and cancelled.

During the year $331,000 of matured but unredeemed Collateral Trust Bonds were paid. Consolidated Debenture Stock to the amount of $397,200, pledged as collateral to these bonds, was released and cancelled.

Equipment obligations to the amount of $3,918,202 matured and were paid, and Consolidated Debenture Stock to the amount of $268,000 pledged under Series "D" was released and cancelled. The sum of $2,746,292 was deposited with the Trustee of the Equipment Trust maturing July 1, 1944. Under authority of the Trust Agreement the Trustee expended $691,117 of the amount deposited in the purchase of new rolling stock to be leased to your Company and also purchased and cancelled $189,000 of the Equipment Trust Certificates.

Serial 4% Secured Notes to the amount of $638,285 were redeemed on February 1, and on such redemption Consolidated Debenture Stock to the amount of $1,631,500 was released and cancelled.

The balance of $18,473,100 Twenty Year 4½% Sinking Fund Secured Note Certificates, maturing December 15, 1944, were called for redemption on June 15. By the end of the year $17,209,700 of these Note Certificates had been redeemed, and the amount owing with respect to the remaining $1,263,400 is included in the balance sheet under Other Current Liabilities.

On December 1, $2,000,000 of the 3% Serial Secured Notes, maturing December 1, 1943, were prepaid. As a result of such prepayment Consolidated Debenture Stock to the amount of $2,000,000 was released and cancelled, and 68,000 shares of capital stock of The Consolidated Mining and Smelting Company of Canada, Limited, were released.

At the beginning of the year 1941 the sum of $210,940 was repaid to the Dominion Government in reduction of the liability for loans made on account of unemployment relief.

The financial transactions for the year provided for the retirement without refunding of $29,486,493 of bonds, notes and other obligations, and in a reduction of $8,249,900 in the amount of Consolidated Debenture Stock issued as collateral.

Pensions

Your Company's outlay under its pension plan and the levies upon it under the United States Railroad Retirement Act aggregating $3,562,671 were included in working expenses.

The number of employees pensioned during the year was 637. After allowing for deductions owing to death and discontinuance from other causes, the total number on the pension payroll at the end of the year was greater by 282 than at the end of 1940.

Distribution by ages was as follows:

Under 60 years of age	252
From 60 to 64 years of age inclusive	507
From 65 to 70 years of age inclusive	2,093
Over 70 years of age	1,594
	4,446

Air Lines

The Air Services Department organized by your Company in 1940 in co-operation with the British Ministry of Aircraft Production ceased operation on July 15. The activities of this department had expanded rapidly in conjunction with the acquisition by the British Government of military aircraft in America and were conducted on a non-profit basis. Atfero, a special branch of the Ministry, took over the operations previously carried on by the civilian organization set up by your Company until the services were finally brought under the direction of the Royal Air Force Ferry Command.

In furtherance of the policy outlined in the proceedings of the

Canadian Pacific Railway Company

General Balance Sheet, December 31, 1941

Assets

Property Investment:		
Railway, Rolling Stock, Inland Steamships, Hotel, Communication and Miscellaneous Properties	$855,795,669	
Improvements on Leased Property	97,722,158	
Ocean and Coastal Steamships	79,249,142	
Stocks, Bonds and Other Securities of Leased, Controlled and Jointly Controlled Railway Companies and Wholly Owned Companies	194,112,303	
		$1,226,879,272
Other Investments:		
Miscellaneous Investments—Cost	$27,595,427	
Advances to Controlled and Other Companies	27,093,673	
Mortgages Collectible and Loans & Advances to Settlers	3,370,894	
Deferred Payments on Lands and Townsites	30,605,011	
Unsold Lands and Other Properties	22,990,193	
Insurance Fund	9,006,509	
Steamship Replacement Fund	21,545,701	
		142,207,408
Current Assets:		
Material and Supplies	$25,125,019	
Agents' and Conductors' Balances	12,143,219	
Miscellaneous Accounts Receivable	12,992,350	
Cash	48,043,813	
		98,304,401
Unadjusted Debits:		
Insurance Prepaid	$203,866	
Unamortized Discount on Bonds	1,949,555	
Other Unadjusted Debits	996,405	
		3,149,826
		$1,470,540,907

Liabilities

Capital Stock:		
Ordinary Stock	$335,000,000	
Preference Stock—4% Non-cumulative	137,256,921	
		$472,256,921
Perpetual 4% Consolidated Debenture Stock	$471,171,229	
Less: Pledged as collateral to bonds, notes and equipment obligations	175,733,000	
		295,438,229
Funded Debt	$190,659,625	
Less: Securities and cash deposited with Trustee of 5% Equipment Trust	13,078,103	
		177,581,522
Current Liabilities:		
Pay Rolls	$4,587,409	
Audited Vouchers	9,746,148	
Net Traffic Balances	1,211,681	
Miscellaneous Accounts Payable	4,520,423	
Accrued Fixed Charges and Guaranteed Interest	2,335,406	
Unmatured Dividend Declared	2,521,391	
Other Current Liabilities	15,472,520	
		40,394,978
Deferred Liabilities:		
Dominion Government Unemployment Relief	$2,447,223	
Miscellaneous	3,463,187	
		5,910,410
Reserves and Unadjusted Credits:		
Maintenance of Way Renewal Reserve	$3,500,000	
Rolling Stock Depreciation Reserve	72,422,242	
Hotel Depreciation Reserve	8,517,877	
Steamship Depreciation Reserve	55,749,033	
Investment Reserves	17,542,428	
Insurance Reserve	9,006,509	
Contingent Reserves	5,184,870	
Unadjusted Credits	3,619,263	
		175,542,222
Premium on Capital and Debenture Stock		68,551,646
Land Surplus		64,479,043
Profit and Loss Balance		170,385,936
		$1,470,540,907

To the Shareholders,

Canadian Pacific Railway Company:

We have examined the Books and Records of the Canadian Pacific Railway Company for the year ending December 31, 1941, and having compared the above Balance Sheet and related schedules therewith, we certify that in our opinion it is properly drawn up so as to show the true financial position of the Company at that date, and that the Income and Profit & Loss Accounts correctly set forth the result of the year's operations.

The records of the securities owned by the Company at December 31, 1941 have been verified by an examination of those securities in the custody of its Treasurer and by certificates received from such depositaries as are holding securities for safe custody for the Company.

PRICE, WATERHOUSE & CO.,
Chartered Accountants.

Montreal, March 9, 1942.

E. A. LESLIE, *Comptroller.*

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last annual meeting with respect to acquisition of a controlling interest in various air lines, your Company acquired the entire capital stock of Arrow Airways Limited and Dominion Skyways Limited, and a majority interest in Canadian Airways Limited, Prairie Airways Limited and Wings Limited.

The operating reorganization of the lines is proceeding, and it is anticipated that as a result of the steps being taken air transportation in Northern and Western Canada will be placed on a more efficient basis. As will be seen from the map accompanying this report, these lines furnish the only practical agency of transportation to and from large portions of the Central and Western Provinces and the Yukon and Northwest Territories. Journeys which now take but a few hours formerly consumed weeks or months by the primitive means of transportation then available.

Practically speaking, the existence of the communities which have been established in these areas depends upon the continuation of aeroplane service.

It is planned to extend these services as requirements demand. Such extensions, other than those directly called for in the prosecution of the war, will of course be restricted by the amount of equipment available for commercial transportation purposes, but subject to that limitation every effort will be made to provide modern and economical air service throughout those parts of the Dominion served by your affiliated companies.

The Government has recognized the necessity for the maintenance of these services, and the necessary priorities have been granted for equipment, repair parts and supplies to enable this to be done.

Your investment in these affiliated companies, including advances for the acquisition of equipment, working capital and other requirements, amounts to approximately $3,400,000. Further steps towards the consolidation of these companies are being taken.

Minneapolis, St. Paul & Sault Ste. Marie Railway Company

The gross earnings of this Company increased by $2,609,258, and the net earnings were $2,313,569 as compared with $2,036,278 in 1940. The grain crop in the area served by the Soo Line amounted to 50 million bushels, compared with 40 million in 1940. This was the largest crop since 1928. Working expenses for 1941 included $396,821 for special amortization of equipment authorized by a defense certificate.

As forecast in the last Annual Report, the negotiations between your Company, the Trustees of the Soo Line and representatives of holders of Soo Line Bonds resulted in an agreed plan of reorganization. This plan was filed with the Interstate Commerce Commission by the Trustees on March 19. It includes a provision that if a plan should finally be approved and made effective substantially in the form of that filed by the Trustees, your Company would enter into a traffic agreement with the reorganized company providing for the continuation of the traffic relationships and arrangements between the two companies which existed between the Trustees of the Soo Line and your Company on November 1, 1940.

A public hearing was held before one of the Commission's examiners in May and his report recommending a modified plan of reorganization was issued on August 29. Exceptions having been filed by some of the parties in interest, a hearing by the Commission was held on October 28. A draft of the proposed new traffic agreement has been agreed upon and filed with the Commission at its request, but no final report has yet been issued.

In the meantime, no further proceedings are being taken in the action pending in the Circuit Court of Cook County, Illinois, referred to in the Annual Report of 1939.

The only action which is being pressed in connection with guarantee of interest on the First Consolidated Bonds is a suit in the State of Ohio in which an appeal from the judgment in favour of your Company is pending.

The Duluth, South Shore & Atlantic Railway Company

The gross earnings of this Company increased by $747,184, and the net earnings were $627,466 as compared with $279,722 in 1940.

The litigation to which reference was made in the last Annual Report is still pending and has further delayed the filing of a plan of reorganization. Just prior to the close of the year, representatives of holders of the First Mortgage Bonds made a request for the re-opening of the negotiations broken off in April, 1940.

Rates and Services

No major changes in freight rates occurred during the year. Eight new agreed charges were put into effect, among them one applying on petroleum products shipped from Calgary to points in Alberta and Saskatchewan. This should be of material assistance in the orderly marketing of the product of Turner Valley oil in the Prairie Provinces.

Effective November 5, 1939, all personnel of His Majesty's forces proceeding on leave were granted a fare for round trip travel equivalent to the regular one-way fare. On July 10, 1941, special passenger fares, at the rate of two-thirds of the one-way fare for the round trip, were put into effect for members of the armed forces on annual or embarkation leave. Half of the reduced fare is paid by the Dominion Government and the other half by the passenger.

Maximum freight, passenger and express rates in Canada were fixed by the Wartime Prices and Trade Board at the level in effect during the period September 15 to October 11, 1941. Increases in such rates may only be made with the concurrence of the Board. Temporary or seasonal rates heretofore existing may be applied as in the past.

New rolling stock placed in service during the year included 25 air-conditioned first class coaches of the most modern design, 10 light weight steel baggage and express cars equipped with end doors for handling automobiles and other special shipments, 500 steel box cars of 50 tons capacity, 550 steel coal cars of 50 tons capacity with twin hoppers and 250 of 70 tons capacity with three hoppers. The 35 locomotives, 150 automobile cars and 25 additional first class coaches for which appropriations were approved at the last annual meeting had not been delivered by the close of the year.

The declaration of war upon Japan resulted in the closing of your Company's agencies in Japanese and Japanese-occupied territory.

Wartime Activities

Transportation requirements during the year were unusually severe. In addition to the heavy traffic handled in regular services, there were many calls for emergency movements. These demands were intensified with the opening of hostilities in the Pacific.

Motive power and other rolling stock were utilized to a degree never before reached in the history of your Company. In the case of freight cars, the improvement was the result to a large extent of whole-hearted co-operation on the part of the shipping public. Moreover, in addition to the substantial increase in the carrying capacity of cars, the improvements in design and construction of the modern equipment provided during recent years have made possible a material reduction in the time spent for repairs.

The increased traffic resulting from war activities necessitated the extension of a number of railway facilities which were adequate for normal business. During the year 36 miles of new yard and siding track were constructed, and 71 miles of new industrial tracks were provided to serve 115 new plants and undertakings throughout the Dominion. Most of this construction pertains to war projects undertaken either by private interests or by the Government and its various agencies.

The programme of munitions production at your Company's shops has proceeded with marked success, and the many difficulties incident to the initiation of the special projects have been effectively overcome. At the close of the year the rate of production of Valentine tanks at the Angus Shops in Montreal had reached the objective of three per day. These tanks compare very favourably in cost with units of similar design produced elsewhere. A considerable number of them have been shipped to Russia, where they have rendered effective service in the field. Certain extensions and additions to the Angus Shops have been constructed for this work.

Preparatory work for the construction of naval guns and mountings at the Ogden Shops in Calgary was completed, and production was under way shortly before the close of the year. The entire locomotive shop at Ogden is being devoted to this purpose, and it has been necessary to make certain additions to

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facilities elsewhere to take care of heavy locomotive repair work previously done at Ogden.

Through the medium of the air lines which have been acquired by your Company, the Royal Canadian Air Force has been supplied with a large number of skilled pilots and technical help for administrative work in the British Commonwealth Air Training Plan. In addition, one elementary flying training school, six air observer schools and three plants for the overhaul of planes and engines are maintained at various points throughout the Dominion. An additional overhaul plant is now under construction.

Your Company's entire fleet of ocean steamships, together with two units of the British Columbia coastal fleet, are either in the service of the Ministry of War Transport of the United Kingdom or serving as auxiliary craft with the Royal Navy. In compliance with government policy, the usual table of steamships and gross tonnage has been omitted from this report.

The growth of the activities of the Canadian office of the Ministry of War Transport, which was organized under the direction of your Chairman and President, required the services of a full time Representative, and Mr. George D. Huband of the Cunard White Star Line was appointed to this post, effective October 1. For the previous two years Mr. Huband had been associated with the Ministry in the United States and has had wide experience in handling shipping problems. Four of your Company's officers, with some members of their staffs, remain in the service of the Ministry, and the office of the Representative is maintained at Windsor Station in Montreal.

A large number of the officers and employees of your Company continue to be engaged in various capacities with departments and agencies of the Canadian and British Governments in the prosecution of the war effort. In addition, at the close of the year, 3,758 officers and employees had enlisted in the armed forces, and 5,552 members of the steamship organization were in Admiralty or other Government service.

Enthusiastic participation of officers and employees in patriotic activities continued throughout the year. War Savings Certificates are being purchased through monthly deductions from wage and salary cheques, and at the end of the year 31,809 employees were participating in this plan. Your Company's staff has also taken an active part in the Victory Loan campaigns of the Dominion Government and has made substantial purchases of Victory Bonds.

The employees' Golden Aircraft Fund, which had been organized in the previous year, presented $50,000 to the Royal Canadian Air Force for the purchase of two fighter planes. The presentation took place on November 26 at a ceremony held in the concourse of Windsor Station in Montreal.

During the year your Company and the Pension Trust Fund subscribed $10,000,000 to the Canadian Victory Loan 1941.

Capital Expenditures

In anticipation of your confirmation, your Directors authorized capital appropriations for the year 1941 amounting to $5,949,762 in addition to those approved at the last annual meeting. Among these was $974,000 for the purchase of one hundred refrigerator cars to be delivered in 1942, and a supplementary appropriation of $820,130 to permit of the purchase of fifteen Pacific type locomotives of a heavier class than contemplated by the original appropriations approved last year. There was also included an amount of $2,137,577, representing the ledger value of rolling stock units of the Montreal and Atlantic, Esquimalt and Nanaimo and Algoma Eastern Railways, which were transferred to your Company's ownership in accordance with the general policy of consolidating the investment in rolling stock as far as possible in the parent company; this transaction involved no cash outlay on the part of your Company.

Your approval will also be requested for capital appropriations of $13,970,890 applicable to the present year. The principal items are:

Replacement and enlargement of structures in permanent form..	$311,943
Additions and betterments to stations, freight sheds, coaling and watering facilities and engine houses	1,178,630
Ties, tie plates, rail anchors, ballasting and miscellaneous roadway betterments	1,819,769
Replacement of rail in main and branch line tracks with heavier section	772,374
Installation of automatic signals	100,613
Additions and betterments to shop machinery	454,654
Additional terminal and side track accommodation	683,627
New rolling stock	7,766,432
Additions and betterments to rolling stock	423,974
Additions and betterments to hotels	16,586
Additions and betterments to communication facilities	260,951

The appropriations for new rolling stock provide for the construction of 7 Pacific type locomotives for passenger and fast freight service, 20 Mikado type locomotives for heavy freight service, 500 40-ton steel box cars, 250 50-ton steel box cars, 150 70-ton ore cars and 30 cabooses.

Co-operation With the Canadian National Railways

One additional co-operative project under the provisions of the Canadian National-Canadian Pacific Act was made effective during the year, viz., the abandonment of 5.09 miles of Canadian National line between Red Deer and Red Deer Junction, Alberta. Under this abandonment the Canadian National Railways use certain of the facilities of your Company, with a net economy estimated at $2,560 per annum to be shared equally by the two railways.

The Board of Transport Commissioners issued orders during the year approving applications involving the abandonment of 38.0 miles of line and disallowing abandonment of 205.1 miles, in addition to rescinding authority issued in 1940 to abandon 37.9 miles. At the end of the year, applications remaining before the Board comprised 229.8 miles of track, including 187.1 miles operated by your Company.

Agreements

The following agreements made by your Directors will be submitted for your approval:—

1. Agreement dated August 1, 1940, between the Canadian National Railway Company and your Company respecting the joint use for switching purposes of certain lines of railway of both parties on the north bank of the Lachine Canal at or near Montreal during the period from January 1, 1930, to December 31, 1949, inclusive; the switching service to be performed by the Canadian National and your Company to pay its wheelage proportion of the expense; each Company to pay one-half of the interest charge on Capital Account and its wheelage proportion of the expense of maintenance and operation (other than switching) of that portion of the joint section owned by the other. This agreement cancels and replaces an agreement with The Grand Trunk Railway Company of Canada dated December 1, 1903.

2. Agreement dated August 1, 1940, between the Canadian National Railway Company and your Company respecting the joint use for switching purposes of your Company's branch on the south bank of the Lachine Canal at or near Montreal during the period January 9, 1929, to December 31, 1949, inclusive; the switching service to be performed by your Company; the Canadian National to pay one-half of the interest charge on Capital Account and its wheelage proportion of the expense of maintenance and operation, including switching.

Stock Holdings

The holdings of the Capital Stock of the Company at December 31 were as follows:

	Ordinary		Preference		Total
	No. of Holders	Percentage of Stock	No. of Holders	Percentage of Stock	Percentage of Stock
Canada	26,012	17.74	154	.60	12.66
United Kingdom and other British	19,316	53.15	25,798	96.37	65.96
United States	14,520	22.83	64	.33	16.16
Other Countries	3,542	6.28	584	2.70	5.22
	63,390		26,600		

Changes in Directorate

It is with deep regret that your Directors report the loss by death during the year of two members of the Board, both members of the Executive Committee and resident in Montreal, the Rt. Hon. Arthur B. Purvis, P. C., in August and Sir Herbert S. Holt, in September.

Sir Herbert Holt was the senior member of the Board of Directors and Executive Committee of the Company, having served as a Director since 1911 and as a member of the Executive Committee since 1914. His wide experience and keen insight were of inestimable value in the conduct of your Company's affairs. As a financier and industrialist he made a notable contribution to the development of Canada, and his practical support

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of education and medical and surgical science was a very important factor in preserving the outstanding position of Montreal in these activities.

Mr. Purvis was appointed a Director in 1938 and was chosen as a member of the Executive Committee in the following year. In his association with your Company he gave to its affairs the full benefit of his wise counsel and great executive ability. His tragic and lamentable death occurred during a visit to Great Britain in the performance of his important duties as Chairman of the British Supply Council in North America. The value of his special services on behalf of the cause of the Allies as well as the splendid contribution which he made to the industrial and economic life of Canada and the improvement of its social conditions were universally recognized.

Mr. L. J. Belnap and Mr. Morris W. Wilson were chosen to fill the vacancies on the Executive Committee.

Retiring Directors

The undermentioned Directors will retire from office at the approaching annual meeting. They are eligible for re-election.

Mr. L. J. Belnap
Hon. Eric W. Hamber
Rt. Hon. Reginald McKenna, P. C.
Mr. Ross H. McMaster
Mr. Morris W. Wilson

Your Directors desire to record their appreciation of the loyal and efficient service given by the officers and employees throughout the year.

For the Directors,
E. W. Beatty,
President.

Montreal, March 16, 1942.

[Advertisement]

Railway Officers

(*Continued from page 728*)

schools, later studying electrical engineering. He entered the service of the Norfolk & Western as a draftsman in the signal department in July, 1904, and was promoted to signal foreman on March 1, 1906. In December of the following year, he was advanced to supervisor of signals in charge of construction and maintenance and on May 1, 1910, he was promoted to general signal inspector. On March 1, 1937, he was advanced to assistant superintendent of signals, which position he held until his recent appointment.

Mr. Richards was born at Brooklyn, N. Y., on March 24, 1872. He attended the Brooklyn Polytechnic Institute, and was graduated in electrical engineering from the Massachusetts Institute of Technology in 1894. He was later engaged with Frank Ridlon & Company, electrical contractors, Boston, and with the National Switch & Signal Company, Easton, Pa. Mr. Richards directed the building of the Norfolk & Western's signal system from its beginning. He installed the railroad's first interlocking plants in 1898 as construction foreman for the Union Switch & Signal Company. In 1900 he entered the services of the Norfolk & Western as signal engineer for the purpose of equipping the entire railway system with signals. On March 1, 1937, he was appointed to head the railway's telegraph and signal department as superintendent, when the two departments were merged.

MECHANICAL

O. H. Clark, general car inspector of the Gulf Coast Lines and the International-Great Northern (both parts of the Missouri Pacific system), with headquarters at Houston, Tex., has been promoted to assistant superintendent of the car department of the Missouri Pacific Lines, with headquarters at St. Louis, Mo., succeeding **F. E. Cheshire,** who has been called to military service.

Otto C. Gruenberg, superintendent motive power of the New York, Ontario & Western, with headquarters at Middletown, N. Y., has been granted a leave of absence for the war's duration for service with the United States Army. **I. R. Pease,** assistant to superintendent motive power, has been promoted to assistant superintendent motive power. **J. J. Meyers,** general locomotive foreman, has been promoted to supervisor locomotive maintenance. **A. R. Green,** general car inspector, has been promoted to supervisor car maintenance. **O. M. Hastings,** general car foreman, has been promoted to supervisor car shops. All of the above will continue their headquarters at Middletown.

Edwin E. Hinchman, whose promotion to assistant superintendent of motive power on the Southern Pacific, with headquarters at Sacramento, Cal., was reported in the *Railway Age* of March 7, was born at San Francisco, Cal., on February 17, 1894, and entered railway service on September 3, 1912, as a draftsman in the office of the general superintendent of motive power of the Southern Pacific at San Francisco. On May 1, 1926, he was appointed dynamometer engineer and on June 16, 1936, he was appointed assistant master mechanic at Roseville, Cal., later being transferred to West Oakland, Cal. On April 1, 1939, Mr. Hinchman was promoted to master mechanic at Bakersfield, Cal., and on July 1, 1941, he was advanced to superintendent of the Los Angeles (Cal.) general shops, which positions he held until his recent promotion, effective March 1.

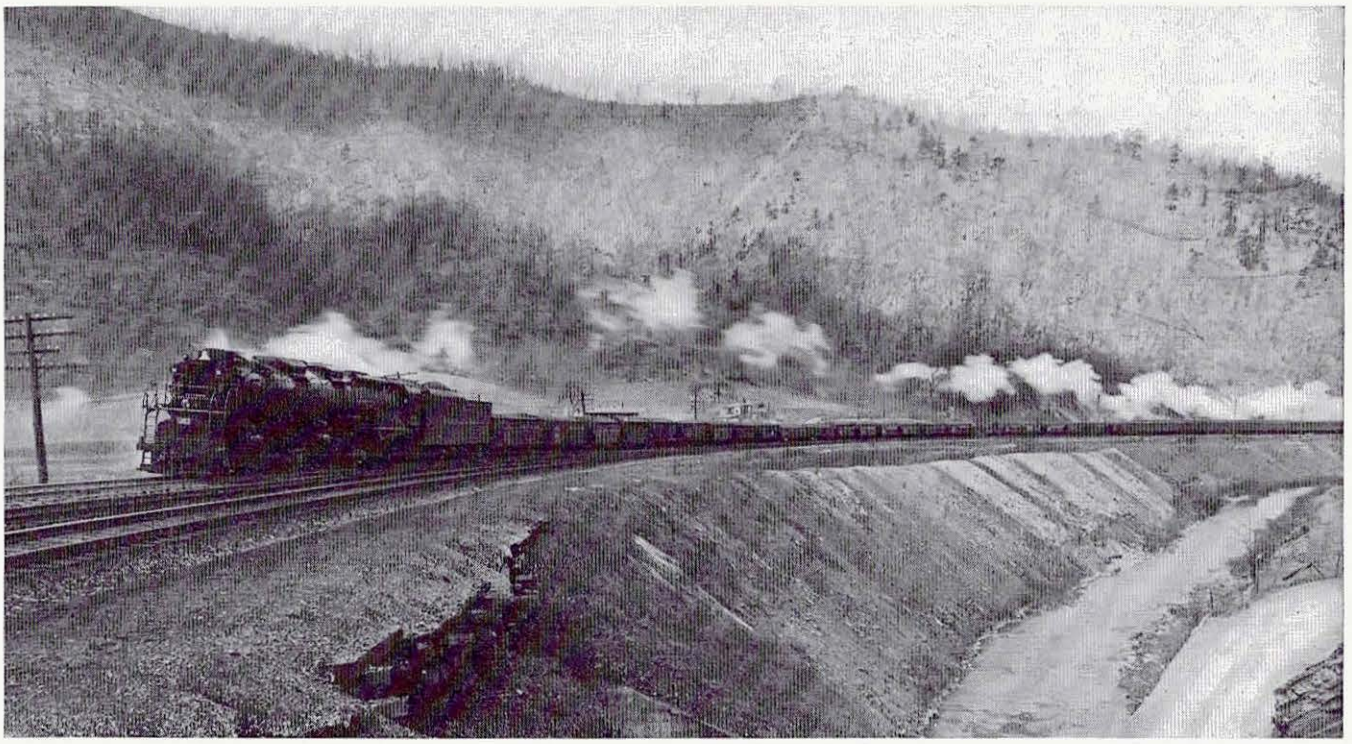
George R. Andersen, district supervisor of car maintenance on the Chicago & North Western at Chicago, has been promoted to assistant superintendent of the car department, with the same headquarters, succeeding **Edward P. Marsh,** whose death on March 22 was reported in the *Railway Age* of March 28. **J. C. Byrne,** supervisor of car maintenance at Green Bay, Wis., has been appointed supervisor of car maintenance at Chicago, relieving Mr. Andersen, and the position of supervisor of car maintenance at Green Bay has been discontinued. **W. R. Hall,** supervisor of car maintenance, Western district, at Boone, Iowa, has been transferred to Chicago, with jurisdiction extended to include the entire railway, except the Chicago district. **C. P. Nelson,** general car forman of the California avenue coach yard at Chicago, has been promoted to assistant superintendent of the passenger shop, Chicago shops, succeeding **G. E. Collins,** who has retired, and **W. Barrer** has been appointed general car foreman of the California avenue coach yard, replacing Mr. Nelson.

Arthur W. Byron has been appointed superintendent of motive power of the Eastern Pennsylvania and the Central Pennsylvania divisions of the Pennsylvania, with headquarters at Harrisburg, Pa., which position was formerly occupied by **M. R. Reed,** who was furloughed in 1938 to become a member of the Railroad Retirement Board in Washington, D. C. Mr. Byron has been on leave of absence since June 1, 1941, when he became affiliated with the Office of Production Management (now the War Production Board). Mr. Byron was born in Buffalo, N. Y., on January 3, 1880, and after attending the grammar and high schools of that city, completed an engineering course at the Y. M. C. A. evening school, and a course in business training at the Buffalo College of Commerce. Prior to his entering the service of the Pennsylvania he worked for two and one-half years with the Lake Shore & Michigan Southern (now New York Central) as a machinist apprentice at Buffalo, where he was schooled in the air brake department, erecting and machine shops and the enginehouse. Mr. Byron entered the service of the Pennsylvania in December, 1899, as a draftsman in the office of the superintendent of motive power at Buffalo and advanced through various supervisory positions in that department to the position of superintendent of motive

Arthur W. Byron

Continued on next left-hand page

Only MODERN POWER . . . .



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LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

power of the Central Pennsylvania division at Williamsport, Pa. While he was master mechanic of the Philadelphia Terminal division from July 16, 1938, to October 16, 1939, he also had general supervision and jurisdiction over the motive power department of the Pennsylvania-Reading Seashore Lines. During World War I, Mr. Byron was furloughed by the Pennsylvania from August 21, 1917, to December 13, 1920, for military duty, serving with the A. E. F. first as superintendent of motive power of Military Railways in the Zone of Advance and thereafter as assistant general superintendent of motive power, in charge of all railway mechanical activities, Zone of Advance. In 1920, he was assigned to duty with the U. S. Liquidation Commission and was honorably discharged from military service in November, 1920, with the rank of Major.

SPECIAL

Frank Dominic O'Dea, acting superintendent of property protection of the Erie, with headquarters at Cleveland, Ohio, has been promoted to superintendent of property protection. Mr. O'Dea was born at Fall Rock, Pa., on July 10, 1895, and entered railway service on May 13, 1919,

Frank Dominic O'Dea

as a patrolman on the Erie at Hornell, N. Y. On January 6, 1920, he was promoted to sergeant of police at Hornell and on June 8, 1926, he was advanced to lieutenant at Binghamton, N. Y. Mr. O'Dea was promoted to captain of police at Hornell on July 1, 1929, and on February 1, 1940, he was further advanced to chief of police, Eastern district, with headquarters at Jersey City. On December 22, 1941, he was appointed acting superintendent of property protection.

OBITUARY

Edward W. Lane, co-trustee of the Florida East Coast, with headquarters at St. Augustine, Fla., died on March 23.

Edward L. Bock, general superintendent of the Western division of the Chesapeake & Ohio, with headquarters at Huntington, W. Va., died on March 30 of a kidney and heart ailment, at the age of 69. Mr. Bock was born at McKeansburg, Pa., on December 7, 1872, and entered railroad service in 1890 with the New York Central & Hudson River (now New York Central). In 1892 he went with the Chesapeake & Ohio, serving successively as telegraph operator, agent, yardmaster, general yardmaster, supervisor of track, trainmaster, assistant superintendent, superintendent and assistant general superintendent, becoming general superintendent in 1919, which position he held until his death.

Frederick W. Suhl, auditor of passenger traffic of the Central of New Jersey, with headquarters at Jersey City, N. J., died at his home in Bayonne, N. J., on March 29, at the age of 65.

Abe L. Ewing, who retired in August, 1936, as assistant treasurer of the Texas & Pacific and the Texas-New Mexico and treasurer of the Weatherford, Mineral Wells & North-Western, with headquarters at Dallas, Tex., died at the St. Paul hospital in that city on March 13.

Frank M. America, editor and manager of the Erie Railroad Magazine and special representative of the president of the Erie, in charge of public relations, died on March 25 at his home in Cleveland, Ohio. Mr. America was born in Buffalo, N. Y., on November 28, 1886, started his newspaper career as a reporter on the old Buffalo Express and later became city editor of the Buffalo News. He left Buffalo to join the Associated Press in New York. When the World War broke out he was assigned to the London bureau of the Associated Press. At the close of the war he became a free lance writer and traveled widely in Europe. He became editor and manager of the Erie Railroad Magazine in November, 1927, with headquarters at New York, later being transferred to Cleveland.

Dr. John P. Getter, a country family physician who founded and headed the recently-abandoned Kishacoquillas Valley railroad, died on March 24 at his home in Belleville, Pa., at the age of 84. Born in Green Spring, Pa., Dr. Getter attended the Cumberland Valley State Normal School at Shippensburg and was graduated in 1882 from the Jefferson Medical College and a year later from the Bellevue Medical College, New York, after which he set up a general medical practice at Belleville. Some years later Dr. Getter became interested in connecting Belleville with a branch of the Pennsylvania reaching Reedsville, 7 mi. distant; was successful in interesting his fellow citizens in the project and opened the road in June, 1893, as its president and general manager, which positions he continued to hold until abandonment of the road in December, 1939.

John W. Rea, who retired on May 1, 1939, as general superintendent of the Western district of the Missouri Pacific, with headquarters at Kansas City, Mo., died of pneumonia on February 20 in a hospital at Monroe, La., following an illness of two weeks. Mr. Rea was born at Wesson, Miss., on April 9, 1879, and entered railway service in January, 1905, as a brakeman on the Illinois Central. The next year he became a conductor on the Yazoo & Mississippi Valley (now a part of the Illinois Central), and in October, 1907, he was advanced to engine foreman and yardmaster. Mr. Rea served from September, 1911, to November, 1915, as a freight conductor on the Illinois Central and he was then promoted to trainmaster on the Memphis division, where he remained until November, 1923, when he was appointed inspector of transportation on the Missouri Pacific at St. Louis, Mo. In January, 1924, he was appointed acting superintendent of the Eastern division, with headquarters at Jefferson City, Mo., and in May of the same year he was promoted to superintendent. Mr. Rea was advanced to general superintendent of the Eastern district on September 1, 1928. He was later appointed successively executive assistant, with headquarters at Little Rock, Ark., and superintendent of the Arkansas division, with the same headquarters. In June, 1935, he was promoted to general superintendent of the Western district, with headquarters at Kansas City, which position he held until his retirement.

Fred H. Law, vice-president in charge of traffic of the Illinois Central, with headquarters at Chicago, died on March 30 in

Fred H. Law

the Illinois Central hospital at Chicago from a stroke suffered the previous day. Mr. Law was born at Sheridan, Ill., on November 10, 1876, and entered railway service on the Illinois Central in 1897 as a stenographer at St. Louis, Mo. In October, 1909, he was appointed commercial agent at Pittsburgh, Pa., and in February, 1912, he was advanced to assistant general freight agent at Memphis, Tenn. A year later he was transferred to St. Louis, Mo., and in February, 1918, he was transferred to Chicago. In June, 1925, Mr. Law was promoted to general freight agent at Chicago and in July, 1928, he was advanced to assistant freight traffic manager. He was further advanced to assistant traffic manager in June, 1931, and on December 1, 1931, he was appointed assistant to the vice-president in charge of traffic. In July, 1935, his title was changed to general traffic manager. On May 1, 1939, he was elected vice-president in charge of traffic, which position he held at the time of his death.

Table of Revenues and Expenses Begins on next left-hand page

BOILER PRESSURE
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TRAIN LOAD-SPEED CAPACITY IS INCREASED BY 33⅓%

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REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1942

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1942	1941
Akron, Canton & Youngstown	Feb.	171	$230,249	$57	$239,498	$30,925	25,500	$15,490	$75,622	$159,029	66.4	$80,469	$57,367	$44,578	$53,016
	2 mos.	171	470,497	138	489,688	71,123	50,383	30,896	155,340	330,126	67.4	159,562	116,434	85,386	116,944
Alton	Feb.	959	1,318,700	304,041	1,823,436	169,350	279,604	46,380	739,832	1,325,747	72.7	497,689	382,238	225,508	66,623
	2 mos.	959	2,835,969	521,961	3,876,843	345,131	538,881	94,958	1,552,130	2,715,071	70.0	1,161,772	925,836	578,619	133,963
Atchison, Topeka & Santa Fe System	Feb.	13,367	17,247,133	2,479,616	21,165,625	2,112,871	3,894,271	474,459	6,641,274	13,549,571	64.0	7,616,054	2,559,557	2,680,617	1,994,861
	2 mos.	13,367	35,236,376	5,330,491	43,516,164	4,573,326	8,156,860	955,772	14,084,711	28,662,784	65.9	14,853,380	6,837,742	6,942,843	3,809,211
Atlanta & West Point	Feb.	93	168,338	47,290	243,881	25,943	33,182	8,866	91,361	171,533	70.3	72,348	44,652	27,315	11,276
	2 mos.	93	319,898	96,542	468,816	49,009	67,456	18,326	188,820	348,905	74.4	119,911	71,525	40,908	22,632
Western of Alabama	Feb.	133	173,735	49,945	246,554	25,933	39,823	8,917	84,189	170,049	69.0	76,505	46,385	37,365	11,888
	2 mos.	133	349,269	99,812	492,534	51,614	80,469	17,979	176,064	349,140	70.9	143,394	83,508	72,610	32,083
Atlanta, Birmingham & Coast	Feb.	639	291,792	32,694	342,905	49,061	56,064	25,080	161,667	307,592	89.7	35,313	9,566	—22,808	—2,245
	2 mos.	639	658,849	67,094	766,205	101,418	117,736	51,784	338,299	642,294	83.8	123,911	71,909	7,070	4,446
Atlantic Coast Line	Feb.	5,010	5,246,941	1,590,361	7,344,550	544,152	1,191,598	194,144	2,472,375	4,692,476	63.9	2,652,074	1,952,074	1,691,881	1,144,785
	2 mos.	5,010	10,112,653	2,934,778	14,066,380	1,126,554	2,486,379	415,909	5,001,508	9,622,400	68.4	4,443,980	3,093,980	2,625,995	2,335,491
Charleston & Western Carolina	Feb.	343	267,093	10,730	284,029	32,923	42,365	10,340	93,103	184,927	65.1	99,102	64,102	59,189	63,773
	2 mos.	343	557,552	19,134	588,841	64,174	86,433	20,161	189,408	373,310	63.4	215,531	135,531	128,987	140,891
Baltimore & Ohio	Feb.	6,273	17,128,309	1,470,391	19,559,118	1,587,914	4,991,873	458,338	7,218,271	14,950,753	76.4	4,608,365	3,112,595	2,915,777	2,796,417
	2 mos.	6,273	34,933,626	2,786,261	39,742,710	3,248,307	10,136,950	861,005	14,911,691	30,643,100	77.1	9,099,610	6,147,191	5,657,729	5,958,622
Staten Island Rapid Transit	Feb.	24	79,531	68,613	155,170	10,825	24,834	1,161	88,669	137,201	88.4	17,969	—9,257	—18,505	—24,400
	2 mos.	24	160,911	140,575	316,137	24,518	50,911	2,474	181,306	283,762	89.8	32,375	—22,076	—40,785	—51,867
Bangor & Aroostook	Feb.	603	522,220	28,896	569,632	100,366	90,882	4,439	163,965	383,626	67.3	186,006	112,906	123,877	154,680
	2 mos.	603	1,129,383	57,547	1,229,330	182,467	188,430	10,479	339,968	772,503	62.8	456,827	285,118	305,406	291,514
Bessemer & Lake Erie	Feb.	214	874,713	831	887,024	135,619	801,961	12,464	234,439	1,227,050	138.3	—340,026	—397,196	—298,365	255,198
	2 mos.	214	1,749,067	1,489	1,774,815	240,425	1,494,615	28,050	481,515	2,328,541	131.2	—553,726	—678,236	—472,969	426,018
Boston & Maine	Feb.	1,865	3,776,520	949,878	5,210,235	667,435	856,414	72,401	1,991,599	3,760,471	72.2	1,449,764	950,760	658,514	694,224
	2 mos.	1,866	7,651,201	1,764,569	10,405,002	1,321,111	1,760,862	138,692	4,170,174	7,747,605	74.5	2,657,397	1,731,640	1,136,487	1,215,790
Burlington, Rock Island	Feb.	251	74,493	22,795	104,951	21,268	13,598	2,310	54,712	102,638	97.8	2,313	—6,994	—10,125	—9,775
	2 mos.	251	156,684	54,045	227,050	41,804	29,996	4,583	105,276	204,062	89.9	22,988	3,915	—4,188	—42,656
Cambria & Indiana	Feb.	37	161,531	.....	161,598	6,778	59,609	436	16,562	89,305	55.26	72,293	—12,328	56,383	93,030
	2 mos.	37	332,838	.....	332,982	13,226	116,023	1,120	34,229	177,628	53.34	155,354	4,413	149,503	203,667
Canadian Pacific Lines in Maine	Feb.	234	338,586	39,586	393,685	36,289	47,000	6,857	125,419	217,559	55.3	176,126	160,541	141,932	109,698
	2 mos.	234	807,842	72,894	914,097	73,462	103,541	14,005	262,717	467,103	51.1	446,994	415,870	353,606	240,957
Canadian Pacific Lines in Vermont	Feb.	90	80,236	9,043	99,543	23,736	24,982	2,552	79,606	134,262	134.9	—34,719	—42,373	—64,379	—36,441
	2 mos.	90	179,860	16,088	217,827	40,559	50,382	4,940	160,302	263,202	120.8	—45,375	—60,599	—108,033	—59,902
Central of Georgia	Feb.	1,815	1,425,147	271,150	1,858,282	216,357	290,987	59,888	761,867	1,425,555	76.7	432,727	297,302	288,102	193,003
	2 mos.	1,815	2,896,958	489,988	3,722,551	449,095	628,280	122,082	1,585,785	2,973,494	79.9	749,057	474,864	441,943	338,662
Central of New Jersey	Feb.	661	3,220,384	421,050	3,878,061	362,570	732,503	50,365	1,620,908	2,867,669	73.9	1,010,392	579,825	320,520	209,452
	2 mos.	661	6,432,212	833,714	7,739,938	793,358	1,523,203	97,022	3,338,642	5,964,482	77.1	1,775,456	1,027,530	500,608	327,011
Central Vermont	Feb.	422	539,933	40,000	612,590	79,508	101,579	10,664	252,519	464,020	75.7	148,570	120,115	86,600	98,113
	2 mos.	422	1,061,043	83,000	1,212,301	149,564	208,546	21,625	526,160	947,431	78.2	264,870	205,617	123,283	125,587
Chesapeake & Ohio	Feb.	3,124	9,810,529	438,707	10,560,319	1,340,444	2,270,477	220,826	2,897,017	7,044,343	66.7	3,515,976	1,391,833	1,620,244	2,744,391
	2 mos.	3,124	21,004,355	988,591	22,642,202	2,673,782	4,631,501	449,562	6,228,991	14,672,409	64.8	7,969,793	3,378,403	3,889,877	5,575,864
Chicago & Eastern Illinois	Feb.	925	1,163,548	225,595	1,541,145	156,144	257,696	57,300	623,699	1,169,504	75.9	371,641	247,641	132,963	132,613
	2 mos.	925	2,494,265	465,095	3,275,811	315,537	535,483	123,398	1,277,097	2,402,582	73.3	873,229	612,229	374,801	347,587
Chicago & Illinois Midland	Feb.	131	476,121	683	495,556	48,935	76,724	20,257	121,051	288,488	58.2	207,068	61,045	49,984	92,896
	2 mos.	131	961,436	1,417	997,406	97,364	164,289	47,037	255,411	607,946	61.0	389,460	157,058	134,848	193,375
Chicago & North Western	Feb.	8,265	7,044,728	1,159,267	9,082,163	1,067,218	2,041,840	190,110	3,578,048	7,225,405	79.6	1,856,758	1,144,972	911,903	624,029
	2 mos.	8,265	13,859,278	2,332,261	18,063,844	2,218,988	3,913,477	389,316	7,488,676	14,755,641	81.7	3,308,203	1,929,391	1,384,411	1,285,947
Chicago, Burlington & Quincy	Feb.	9,101	8,515,431	1,041,748	10,496,763	737,548	1,725,788	233,452	3,439,244	6,494,684	61.9	4,002,079	2,561,273	2,331,094	1,535,211
	2 mos.	9,101	17,382,376	2,111,177	21,474,740	1,635,309	3,605,425	504,728	7,295,181	13,789,517	64.2	7,685,223	4,875,696	4,414,402	3,199,666
Chicago Great Western	Feb.	1,502	1,627,440	87,521	1,834,730	211,130	273,356	60,258	704,994	1,307,194	71.2	527,536	373,465	191,290	142,905
	2 mos.	1,502	3,333,870	163,533	3,749,887	446,195	539,001	125,390	1,473,513	2,694,062	71.8	1,055,825	758,608	361,760	327,314
Chicago, Indianapolis & Louisville	Feb.	549	769,788	43,126	870,169	71,392	162,130	28,795	298,966	597,010	68.6	273,159	226,952	149,905	90,692
	2 mos.	549	1,589,767	83,644	1,798,074	143,895	336,567	58,371	627,252	1,238,100	68.9	559,974	465,081	306,314	194,967

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SPECIAL BRICK

SHAPES

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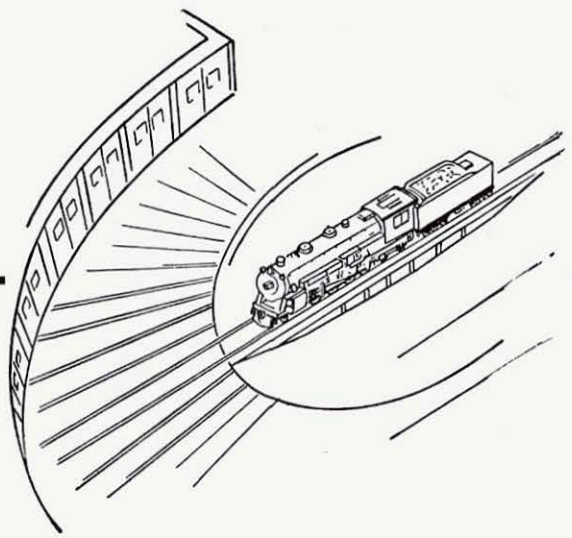

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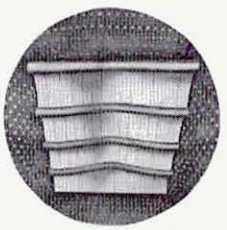

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REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1942—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1942	Net railway operating income 1941
Chicago, Milwaukee, St. Paul & Pacific	Feb.	10,821	$10,169,874	$889,869	$11,987,211	$988,323	$1,878,527	$233,010	$4,346,607	$7,908,483	66.0	4,078,728	2,540,728	2,236,069	1,665,501
	2 mos.	10,821	21,161,157	1,837,917	24,970,761	2,121,775	3,923,370	471,611	9,156,969	16,644,691	66.7	8,326,070	5,937,070	5,240,457	3,421,923
Chicago, Rock Island & Pacific	Feb.	7,925	6,764,881	1,249,456	8,581,050	707,177	1,419,752	278,593	3,048,006	5,882,245	68.5	2,698,805	2,189,742	1,829,571	869,467
	2 mos.	7,937	13,698,644	2,560,743	17,506,109	1,551,514	2,911,556	572,081	6,406,868	12,303,373	70.3	5,202,736	4,160,540	3,481,572	1,928,838
Chicago, St. Paul, Minneapolis & Omaha	Feb.	1,629	1,419,775	148,395	1,671,307	172,739	307,766	39,148	772,304	1,359,555	81.3	311,752	191,882	78,588	—16,014
	2 mos.	1,629	2,910,905	306,877	3,436,983	355,731	632,735	81,382	1,636,767	2,847,826	82.9	589,157	342,015	128,581	—12,584
Clinchfield Railroad	Feb.	308	908,720	3,787	918,043	48,742	144,161	21,220	184,216	417,498	45.5	500,545	396,061	397,876	427,941
	2 mos.	308	1,908,183	8,082	1,928,217	102,298	296,208	41,415	399,743	878,152	45.5	1,050,065	841,023	837,224	868,751
Colorado & Southern	Feb.	755	470,506	93,979	620,063	38,429	121,318	13,819	246,705	450,162	72.6	169,901	127,222	106,356	70,461
	2 mos.	755	1,017,948	193,029	1,322,458	89,961	265,756	27,966	529,801	976,349	73.8	346,109	239,172	187,629	165,775
Fort Worth & Denver City	Feb.	804	420,013	154,678	672,222	65,509	91,195	20,244	200,040	413,740	61.5	258,482	221,274	192,532	39,709
	2 mos.	804	859,426	296,383	1,345,243	135,025	190,450	41,497	422,090	864,538	64.3	480,705	404,290	340,593	82,052
Colorado & Wyoming	Feb.	42	78,743	.....	126,658	8,660	11,997	835	48,230	74,331	58.6	52,327	27,215	26,637	33,866
	2 mos.	42	169,878	.....	272,963	18,320	24,923	1,748	101,128	154,111	56.4	118,852	59,495	58,170	79,666
Columbus & Greenville	Feb.	168	82,664	1,787	90,201	15,981	14,229	4,559	32,414	79,124	87.7	11,077	2,239	3,248	9,244
	2 mos.	168	185,758	6,027	203,178	32,892	35,895	10,113	69,572	171,425	84.4	31,753	10,500	12,907	14,045
Delaware & Hudson	Feb.	849	2,905,424	90,998	3,067,196	306,430	599,934	41,502	1,080,275	2,134,011	69.6	933,185	664,513	614,089	481,451
	2 mos.	849	5,840,870	192,702	6,186,754	600,704	1,326,434	86,093	2,203,547	4,426,859	71.6	1,759,895	1,257,725	1,168,067	958,094
Delaware, Lackawanna & Western	Feb.	985	3,982,000	590,231	5,017,883	348,761	815,690	111,064	2,176,628	3,603,706	71.8	1,414,177	639,177	576,452	705,378
	2 mos.	985	8,116,379	1,220,650	10,265,375	740,111	1,737,089	221,861	4,545,192	7,546,096	73.5	2,719,279	1,208,279	1,058,402	1,504,843
Denver & Rio Grande Western	Feb.	2,431	2,516,520	221,287	2,872,223	202,926	613,118	84,171	1,075,381	2,085,474	72.6	786,749	564,729	546,308	—58,245
	2 mos.	2,431	5,349,860	397,673	6,010,340	385,295	1,218,697	178,079	2,297,106	4,308,972	71.7	1,701,368	1,251,514	1,174,525	181,864
Denver & Salt Lake	Feb.	232	161,706	5,582	176,141	12,516	42,996	2,549	65,952	133,758	75.9	42,383	17,866	65,668	55,146
	2 mos.	232	427,220	12,703	458,445	32,800	90,066	5,335	155,009	303,485	66.2	154,960	104,436	195,497	160,142
Detroit & Mackinac	Feb.	242	52,082	2,352	62,310	6,565	11,830	603	25,938	48,382	77.6	13,928	10,544	6,008	—4,269
	2 mos.	242	106,245	7,092	128,738	14,399	23,564	1,491	54,118	100,221	77.8	28,517	21,494	12,454	—11,819
Detroit & Toledo Shore Line	Feb.	50	363,262	.....	363,932	19,673	26,836	8,958	98,375	161,723	44.4	202,209	130,300	70,173	119,688
	2 mos.	50	795,125	.....	796,797	41,113	52,976	18,192	207,086	335,206	42.1	461,591	313,880	186,227	234,746
Detroit, Toledo & Ironton	Feb.	465	733,689	297	764,294	82,922	112,792	12,788	182,857	412,775	54.0	351,519	206,423	182,602	311,599
	2 mos.	465	1,511,028	626	1,584,845	152,231	223,994	26,067	373,288	821,277	51.8	763,568	464,160	408,341	606,154
Duluth, Missabe & Iron Range	Feb.	542	143,684	1,070	168,580	176,436	315,556	3,944	202,995	732,860	434.7	—564,280	—120,004	—121,415	—772,100
	2 mos.	542	239,270	2,100	291,645	384,863	648,995	8,143	409,862	1,524,007	522.6	—1,232,362	—1,355,310	—1,371,186	—1,598,738
Duluth, Winnipeg & Pacific	Feb.	175	178,900	1,000	183,300	29,704	23,971	1,977	70,761	129,047	70.4	54,253	40,316	15,801	10,125
	2 mos.	175	356,900	1,800	365,400	52,482	51,487	3,982	142,015	256,309	70.1	109,091	81,048	36,427	27,884
Elgin, Joliet & Eastern	Feb.	392	2,128,604	21	2,390,322	162,836	478,528	16,111	881,706	1,645,798	68.9	744,524	173,906	—4,550	577,278
	2 mos.	392	4,506,614	41	5,070,806	330,948	967,215	32,612	1,886,458	3,364,695	66.4	1,706,111	807,495	504,993	1,180,484
Erie	Feb.	2,251	8,148,535	419,527	9,076,593	756,330	1,690,004	194,791	3,436,328	6,389,064	70.4	2,687,529	1,666,952	1,311,653	1,497,165
	2 mos.	2,251	16,731,867	872,033	18,602,901	1,531,418	3,350,557	390,875	7,103,125	13,001,892	69.9	5,601,009	3,470,930	2,773,800	3,074,384
Florida East Coast	Feb.	685	766,172	563,476	1,466,958	118,768	155,815	33,232	455,968	844,811	57.6	622,147	544,916	484,656	438,659
	2 mos.	685	1,567,082	956,948	2,800,441	267,397	379,502	67,297	966,890	1,861,181	66.5	939,260	782,163	677,351	722,652
Georgia Railroad	Feb.	329	497,036	57,648	584,590	46,286	66,531	21,105	208,769	357,260	61.1	227,330	208,048	198,060	79,001
	2 mos.	329	987,603	120,130	1,165,134	93,103	140,244	41,695	427,329	733,280	62.9	431,854	392,786	375,580	171,189
Georgia & Florida	Feb.	408	132,557	1,555	140,544	33,424	21,045	10,068	46,675	117,890	83.9	22,654	13,794	4,826	—5,716
	2 mos.	408	284,479	3,837	298,745	67,278	41,519	20,016	98,862	240,378	80.5	58,367	40,421	20,283	—9,004
Grand Trunk Western	Feb.	1,026	1,874,000	112,000	2,129,000	301,760	441,281	37,404	925,198	1,777,647	83.5	351,353	211,905	125,519	538,131
	2 mos.	1,026	4,026,000	203,000	4,518,000	612,146	920,468	75,687	1,951,290	3,708,808	82.1	809,192	521,708	370,333	925,600
Canadian National Lines in New England	Feb.	172	236,500	2,800	258,000	55,705	34,012	2,520	102,672	207,471	80.4	50,529	32,009	—33,910	—58,021
	2 mos.	172	445,300	6,500	491,500	96,198	64,376	5,026	200,096	392,092	79.8	99,408	62,368	—63,648	—91,804
Great Northern	Feb.	8,077	7,693,806	431,504	8,673,323	1,017,936	1,963,291	184,213	2,944,134	6,392,797	73.7	2,280,526	1,125,806	1,062,994	42,846
	2 mos.	8,077	15,774,592	855,901	17,804,210	2,147,379	4,148,023	375,760	6,127,814	13,414,177	75.3	4,390,033	2,273,099	2,067,608	70,427
Green Bay & Western	Feb.	234	169,168	199	174,702	22,602	19,799	9,172	51,812	109,085	62.4	65,617	47,475	38,027	17,844
	2 mos.	234	338,545	521	348,839	48,341	42,079	18,187	110,979	231,516	66.3	117,323	80,621	62,218	54,700
Gulf & Ship Island	Feb.	259	121,754	16,599	151,021	20,133	28,728	2,942	64,088	121,539	80.5	29,482	10,267	—1,776	—18,302
	2 mos.	259	256,484	32,977	311,735	41,776	51,014	6,176	131,640	242,870	77.9	68,865	30,487	6,200	—15,585

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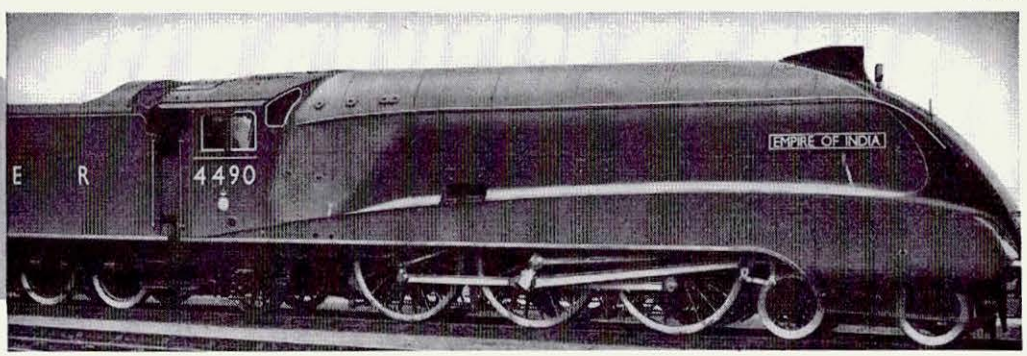

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AMERICAN THROTTLE COMPANY, INC.
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THE SUPERHEATER COMPANY, LTD.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1942—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1942	1941
Gulf, Mobile & Ohio	Feb.	1,969	$1,882,673	$49,532	$2,011,388	$305,868	$346,090	$87,057	$610,345	$1,447,698	72.0	$563,690	$382,110	$243,241	$218,113
	2 mos.	1,969	3,810,128	100,447	4,065,415	626,114	671,240	176,625	1,266,685	2,938,515	72.3	1,126,900	743,000	496,388	470,214
Illinois Central	Feb.	4,950	10,044,962	1,266,321	12,006,887	1,140,282	2,483,134	226,796	4,006,139	8,279,149	69.0	3,727,738	1,888,285	1,803,590	1,951,168
	2 mos.	4,950	20,016,189	2,536,449	23,947,125	2,289,165	5,185,804	462,668	8,288,043	17,092,772	71.4	6,854,353	3,652,339	3,495,939	3,964,146
Yazoo & Mississippi Valley	Feb.	1,550	2,027,523	130,342	2,229,865	130,100	245,310	35,416	656,691	1,126,395	50.5	1,103,470	944,685	881,382	—111,237
	2 mos.	1,550	3,860,735	248,366	4,275,871	285,135	510,965	74,456	1,369,101	2,361,452	55.2	1,914,419	1,593,790	1,445,966	76,937
Illinois Central System	Feb.	6,500	12,072,485	1,396,663	14,236,752	1,270,382	2,728,444	262,212	4,662,830	9,405,544	66.1	4,831,208	2,827,916	2,690,885	1,848,845
	2 mos.	6,500	23,876,924	2,784,815	28,222,996	2,574,300	5,696,769	537,124	9,657,144	19,454,224	68.9	8,768,772	5,236,021	4,953,731	4,058,909
Illinois Terminal	Feb.	476	430,464	85,039	567,573	49,248	73,783	17,587	194,055	353,658	62.31	213,915	142,423	126,450	99,231
	2 mos.	476	904,907	170,356	1,185,838	103,576	164,999	36,521	406,135	749,334	63.19	436,504	289,328	252,126	187,935
Kansas City Southern	Feb.	880	1,535,371	158,321	1,825,368	224,229	287,366	55,798	524,397	1,161,644	63.6	663,724	515,724	401,830	313,254
	2 mos.	880	3,068,704	248,495	3,588,298	456,577	565,235	107,533	1,058,444	2,333,309	65.0	1,254,989	958,989	741,636	627,737
Kansas, Oklahoma & Gulf	Feb.	328	189,604	427	192,505	14,461	12,005	9,396	51,306	100,518	52.2	91,987	57,123	38,203	73,896
	2 mos.	328	398,352	903	404,754	26,413	22,973	19,402	107,619	201,079	49.7	203,675	134,337	94,657	156,134
Lake Superior & Ishpeming	Feb.	156	36,612	53	39,473	18,854	40,276	471	25,105	92,539	234.4	—53,066	—78,435	—71,583	—64,324
	2 mos.	156	70,405	108	76,011	39,057	86,668	1,142	51,028	193,958	255.2	—117,947	—168,824	—155,921	—128,162
Lehigh & Hudson River	Feb.	96	271,318	.....	271,886	16,578	27,630	4,934	82,426	139,065	51.1	132,821	69,375	42,208	23,292
	2 mos.	96	494,155	.....	495,432	37,948	61,020	9,312	148,993	271,373	54.8	224,059	118,644	74,435	48,890
Lehigh & New England	Feb.	190	430,498	.....	433,117	35,074	86,182	7,343	131,098	277,871	64.2	155,246	96,912	106,425	85,452
	2 mos.	190	810,043	.....	814,778	71,317	173,204	15,443	262,490	556,165	68.3	258,613	158,898	177,800	196,124
Lehigh Valley	Feb.	1,263	4,280,251	214,122	4,752,857	311,127	851,645	103,074	2,096,926	3,516,522	74.0	1,236,335	799,220	474,342	813,628
	2 mos.	1,263	8,625,918	432,584	9,604,329	712,827	1,743,533	211,072	4,316,938	7,303,357	76.0	2,300,972	1,427,348	774,853	1,634,073
Louisiana & Arkansas	Feb.	877	867,067	48,120	953,300	133,561	119,438	29,378	252,565	576,579	60.5	376,721	238,253	183,053	152,560
	2 mos.	877	1,700,765	96,525	1,873,679	280,026	243,379	66,499	506,412	1,177,693	62.9	695,986	462,820	358,946	326,231
Louisville & Nashville	Feb.	4,798	8,755,802	1,067,832	10,338,061	1,096,075	2,094,198	193,852	3,470,276	7,185,085	69.5	3,152,976	1,489,944	1,622,203	1,835,711
	2 mos.	4,799	17,993,180	2,173,720	21,319,506	2,286,020	4,329,421	402,594	7,362,263	15,077,190	70.7	6,242,316	2,992,549	3,366,438	3,684,148
Maine Central	Feb.	991	1,175,844	114,429	1,378,238	167,742	245,224	11,115	497,126	960,099	69.7	418,139	262,775	204,258	273,664
	2 mos.	991	2,349,308	220,366	2,759,309	334,072	509,178	22,424	992,211	1,943,520	70.4	815,789	511,133	403,429	456,409
Midland Valley	Feb.	351	110,185	2	112,447	9,317	9,482	2,384	33,366	61,189	54.4	51,258	40,196	30,271	26,864
	2 mos.	351	238,064	6	243,138	19,622	17,219	5,184	76,315	132,615	54.5	110,523	84,126	57,354	65,195
Minneapolis & St. Louis	Feb.	1,409	1,030,943	25,534	1,095,032	119,655	132,386	53,467	347,780	693,120	63.3	401,912	348,103	315,245	74,340
	2 mos.	1,409	1,980,336	41,465	2,097,936	185,792	294,321	110,504	709,663	1,385,404	66.0	712,532	606,497	526,439	126,346
Minneapolis, St. Paul & Sault Ste. Marie	Feb.	4,277	2,497,824	68,912	2,717,003	313,991	486,797	64,017	1,141,951	2,101,708	77.4	615,295	401,514	329,748	42,522
	2 mos.	4,277	5,167,277	142,028	5,624,791	668,248	1,028,215	134,228	2,416,203	4,447,186	79.1	1,177,605	712,272	538,755	83,555
Duluth, South Shore & Atlantic	Feb.	550	221,611	9,807	243,825	30,127	48,366	8,375	102,851	195,966	80.4	47,859	32,267	28,310	—8,513
	2 mos.	550	500,156	19,865	547,190	73,702	106,425	17,051	216,270	427,052	78.0	120,138	87,382	79,602	14,904
Spokane International	Feb.	152	59,103	436	66,696	15,868	7,452	2,485	22,864	52,942	79.4	13,754	8,458	4,245	4,999
	2 mos.	152	128,548	1,188	144,564	31,324	15,767	5,066	49,232	110,090	76.2	34,474	23,669	15,522	15,819
Mississippi Central	Feb.	158	106,123	4,913	111,689	19,200	12,859	7,752	28,811	72,777	65.2	38,912	32,513	26,950	13,922
	2 mos.	158	201,799	5,891	209,415	42,776	25,318	15,807	53,351	146,091	69.8	63,324	51,653	39,271	41,849
Missouri & Arkansas	Feb.	365	113,762	1,432	122,312	24,293	13,975	7,238	50,348	101,050	82.6	21,262	16,414	3,352	6,939
	2 mos.	365	216,966	3,217	241,146	47,997	26,889	15,267	97,165	197,833	82.0	43,313	33,521	8,755	15,310
Missouri-Illinois	Feb.	172	190,533	199	191,876	20,288	30,094	3,017	49,992	109,551	57.1	82,325	49,090	39,301	45,892
	2 mos.	172	405,714	394	408,652	35,749	58,189	6,747	112,498	225,892	55.3	182,760	109,728	86,325	104,071
Missouri-Kansas-Texas Lines	Feb.	3,293	2,608,909	509,869	3,383,958	346,025	551,512	120,684	1,165,641	2,328,875	68.8	1,055,083	858,017	587,056	198,998
	2 mos.	3,293	5,230,497	968,582	6,753,136	739,914	1,132,371	245,162	2,433,097	4,855,048	71.9	1,898,088	1,505,790	981,056	373,745
Missouri Pacific	Feb.	7,136	8,277,538	1,002,376	10,071,369	1,042,494	1,734,356	254,418	3,456,946	6,809,022	67.6	3,262,347	2,689,360	2,152,029	1,447,577
	2 mos.	7,136	16,949,568	2,066,695	20,629,655	2,150,097	3,506,689	538,539	7,202,983	14,087,318	68.3	6,542,337	5,383,160	4,410,266	2,971,739
Gulf Coast Lines	Feb.	1,772	2,239,724	71,946	2,397,927	258,585	232,550	50,404	615,832	1,219,444	50.9	1,178,483	1,086,072	841,792	311,017
	2 mos.	1,772	4,332,491	152,358	4,651,780	523,159	474,440	95,696	1,239,196	2,458,775	52.9	2,193,005	2,011,283	1,570,999	623,043
International Great Northern	Feb.	1,155	957,842	109,342	1,192,254	196,898	240,971	33,173	489,846	1,023,455	85.8	168,799	100,037	36,289	14,876
	2 mos.	1,155	2,008,419	243,316	2,509,032	398,421	494,606	62,547	1,018,293	2,103,291	83.8	405,741	264,855	130,525	72,479
Monongahela	Feb.	172	519,767	561	522,280	41,483	42,192	497	128,879	216,257	41.4	306,023	202,098	112,117	113,326
	2 mos.	172	1,072,391	1,062	1,077,961	90,837	86,725	1,039	267,815	452,612	42.0	625,349	416,632	226,886	212,120

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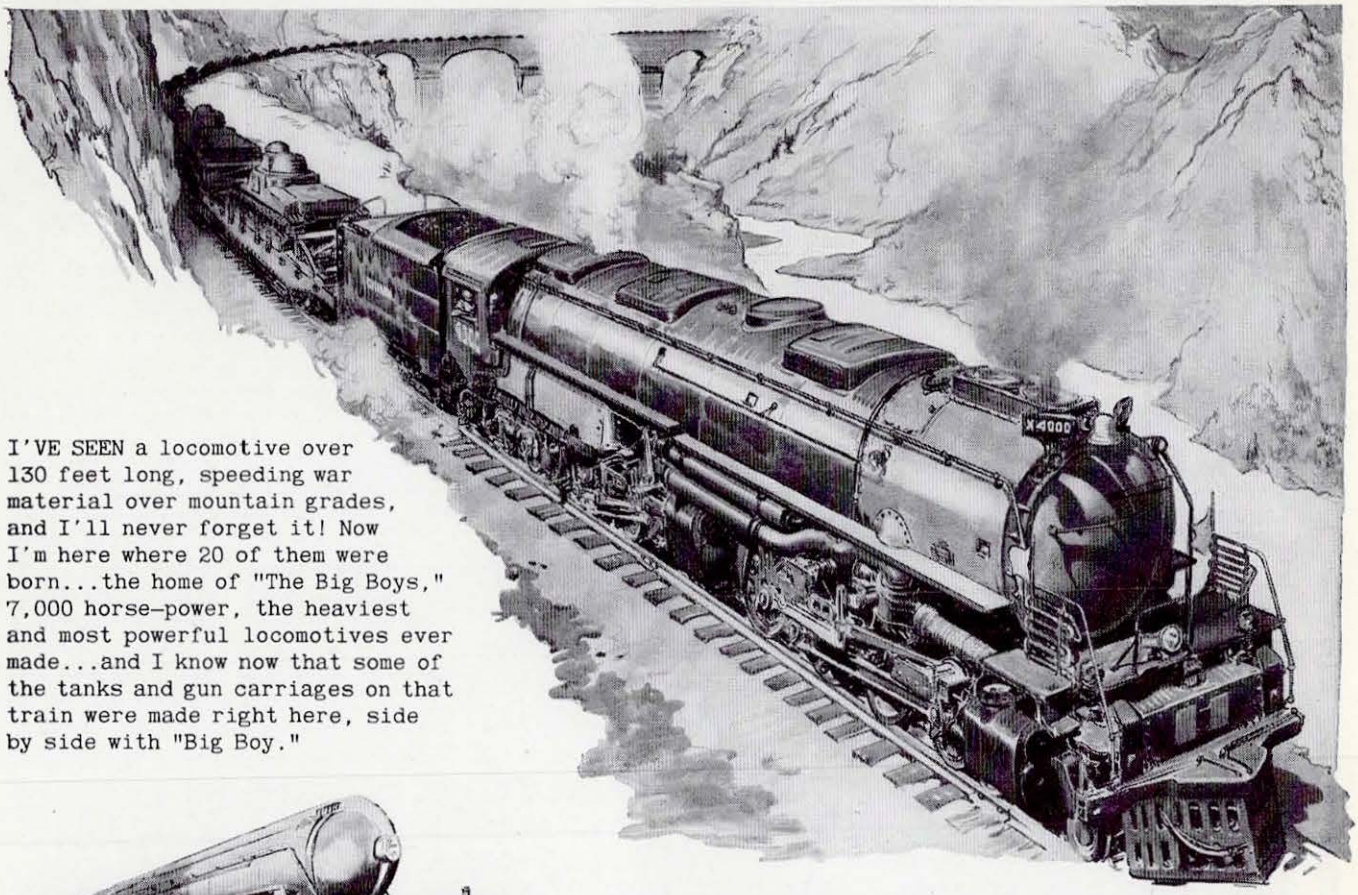
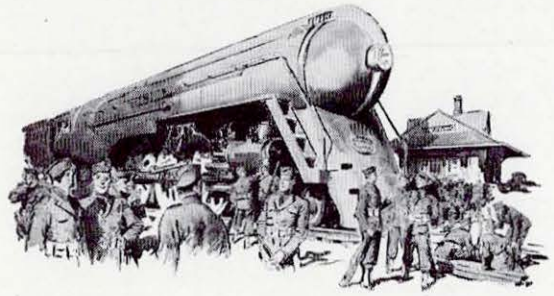
AMERICA IN MOTION . . . . by Lowell Thomas

News summary from national arsenal of mobile power

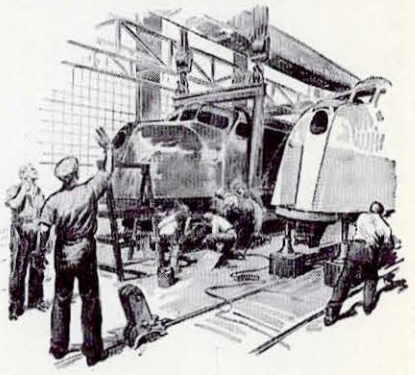


I'VE SEEN a locomotive over 130 feet long, speeding war material over mountain grades, and I'll never forget it! Now I'm here where 20 of them were born...the home of "The Big Boys," 7,000 horse-power, the heaviest and most powerful locomotives ever made...and I know now that some of the tanks and gun carriages on that train were made right here, side by side with "Big Boy."

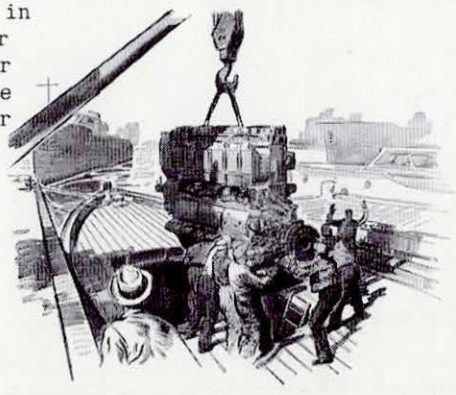


I'VE WATCHED troops unloading from train after train, powered by fast Diesel or Steam-Liners. And now I understand how the railroads are able to handle this big job, biggest in history, so well. Here they build the most modern, streamlined locomotives in the world, both steam and diesel-powered. Build them fast. Build them to win.

I'VE FELT all along that power to produce is our greatest asset. But I never saw a speed-up so swift or so well directed as this. Men swarming all over a Diesel locomotive, building medium tanks... ...skilled man-power under experienced directions. We Americans, we expect miracles. And by George, we get them!



I ASKED about power, and I got my answer in terms of diesels for the Navy...Diesel or Steam-Liners for the railroads, whichever is needed to do a particular job best...tanks and gun carriages for the Army. A great country, this. And something I saw here tells me we're going to keep it that way.



AMERICAN LOCOMOTIVE

MANUFACTURERS OF MOBILE POWER

STEAM, DIESEL AND ELECTRIC LOCOMOTIVES

MARINE DIESELS, TANKS

GUN CARRIAGES AND OTHER ORDNANCE

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1942—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1942	1941
Montour	Feb.	51	$144,223	$.....	$145,901	$11,248	$48,555	$787	$47,616	$115,120	78.9	$30,781	—$3,646	$37,355	$60,701
	2 mos.	51	321,762	.....	325,340	21,142	105,617	1,606	105,316	248,050	76.2	77,290	3,434	80,676	116,489
Nashville, Chattanooga & St. Louis	Feb.	1,111	1,361,028	201,161	1,699,969	192,762	336,672	72,395	695,687	1,366,719	80.4	333,250	189,242	174,100	178,017
	2 mos.	1,111	2,802,389	421,368	3,537,509	431,428	700,300	148,617	1,432,024	2,845,156	80.4	692,353	406,410	385,033	403,538
Nevada Northern	Feb.	165	52,461	650	55,633	7,719	3,198	1,162	9,497	28,001	50.3	27,632	10,701	12,275	10,943
	2 mos.	165	105,849	1,293	112,312	17,170	6,108	2,381	19,414	57,088	50.8	55,224	21,470	24,817	19,759
New York Central	Feb.	10,918	28,588,356	6,222,708	38,158,875	3,912,701	8,329,761	567,383	15,009,326	29,430,592	77.1	8,728,283	4,782,962	3,659,244	3,985,344
	2 mos.	10,918	57,621,944	13,139,565	77,628,485	8,078,341	17,185,180	1,171,485	31,268,348	61,013,304	78.6	16,615,181	9,160,453	6,837,811	8,736,293
Pittsburgh & Lake Erie	Feb.	232	2,078,779	59,416	2,197,574	217,985	803,031	39,135	722,813	1,876,843	85.4	320,731	—185,302	223,697	486,417
	2 mos.	232	4,410,346	116,393	4,651,792	436,049	1,681,478	80,063	1,529,881	3,923,061	84.3	728,731	—124,103	692,794	958,814
New York, Chicago & St. Louis	Feb.	1,688	5,362,429	135,377	5,616,332	454,664	754,061	131,885	1,930,232	3,407,506	60.7	2,208,826	1,634,681	1,205,872	963,938
	2 mos.	1,688	10,590,309	235,831	11,062,927	980,894	1,514,883	264,019	3,915,131	6,954,879	62.9	4,108,048	3,019,748	2,226,858	1,996,668
New York, New Haven & Hartford	Feb.	1,839	5,961,780	3,369,966	10,132,395	964,436	1,488,231	113,261	3,652,039	6,679,041	65.9	3,453,354	2,453,354	1,557,832	996,929
	2 mos.	1,839	11,878,446	6,444,538	19,947,188	2,037,651	3,108,424	229,573	7,450,520	13,781,135	69.1	6,166,053	4,266,053	2,525,892	1,897,043
New York Connecting	Feb.	....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....
	2 mos.	....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....
New York, Ontario & Western	Feb.	547	438,791	11,890	484,419	53,112	104,095	18,607	262,953	458,886	94.7	25,533	—2,793	—27,912	—76,679
	2 mos.	547	879,498	17,257	971,731	111,820	205,285	35,514	538,711	934,229	96.1	37,502	—20,267	—79,944	—132,813
New York, Susquehanna & Western	Feb.	262	241,641	31,226	289,972	22,606	33,268	2,572	131,277	201,579	69.5	88,393	57,981	24,848	43,567
	2 mos.	262	500,941	62,137	607,488	48,089	64,074	4,770	268,266	407,988	67.2	199,500	138,506	67,962	96,246
Norfolk & Western	Feb.	2,181	8,499,516	337,769	9,095,158	975,146	2,033,414	158,414	2,200,369	5,579,512	61.3	3,515,646	976,171	1,433,854	2,616,184
	2 mos.	2,181	18,350,186	738,938	19,631,022	1,986,624	4,126,153	319,918	4,620,107	11,588,336	59.0	8,042,686	2,748,524	3,697,143	5,553,681
Norfolk Southern	Feb.	733	449,608	7,300	470,671	92,083	64,236	27,107	165,301	374,080	79.5	96,591	58,613	40,998	18,164
	2 mos.	733	897,616	13,207	941,604	190,374	128,354	53,136	338,565	760,056	80.7	181,548	109,159	70,231	44,684
Northern Pacific	Feb.	6,889	6,324,713	434,070	7,319,209	875,495	1,650,466	160,144	2,443,368	5,460,785	74.6	1,858,424	989,501	1,367,869	621,425
	2 mos.	6,889	12,801,399	858,836	14,799,654	1,750,078	3,356,974	324,118	5,148,030	11,263,187	76.1	3,536,467	1,794,568	2,562,083	1,256,247
Northwestern Pacific	Feb.	345	248,390	5,707	267,983	106,569	46,408	2,431	121,482	284,025	106.0	—16,042	—39,274	—54,161	—56,560
	2 mos.	345	538,666	12,978	581,879	201,700	97,286	5,272	253,635	572,220	98.3	9,659	—37,150	—63,712	—112,271
Oklahoma City-Ada-Atoka	Feb.	132	80,019	.....	83,402	10,951	2,898	745	19,150	35,779	42.9	47,623	28,127	18,136	—3,254
	2 mos.	132	148,361	.....	152,424	19,850	3,730	1,706	37,502	66,929	43.9	85,495	57,069	37,029	—2,759
Pennsylvania	Feb.	10,215	38,662,401	9,505,865	51,846,286	5,532,435	11,861,943	743,783	20,853,030	40,652,192	78.4	11,194,094	5,331,320	4,210,309	5,704,575
	2 mos.	10,215	79,891,090	19,710,235	107,194,458	11,275,502	24,397,962	1,535,883	42,660,328	83,271,859	77.7	23,922,599	12,185,523	10,048,939	12,080,290
Long Island	Feb.	378	748,721	1,287,411	2,157,648	275,691	374,952	8,984	1,107,361	1,814,316	84.1	343,332	120,405	—63,320	21,828
	2 mos.	378	1,495,905	2,665,684	4,402,206	541,486	759,958	18,178	2,221,054	3,658,527	83.1	743,679	294,190	—63,178	—30,311
Pennsylvania-Reading Seashore Lines	Feb.	406	355,590	101,209	481,803	88,078	102,360	6,948	322,478	538,366	111.7	—56,563	—141,450	—213,960	—166,809
	2 mos.	406	779,439	197,056	1,024,966	180,391	197,845	14,158	665,472	1,095,379	106.9	—70,413	—241,790	—402,198	—377,309
Pere Marquette	Feb.	2,055	2,662,812	108,186	2,890,319	397,104	716,910	69,274	1,196,269	2,491,420	86.2	398,899	190,853	277,544	547,007
	2 mos.	2,055	5,604,383	221,812	6,070,963	795,723	1,390,739	135,504	2,459,169	5,005,138	82.4	1,065,825	588,522	603,863	1,083,780
Pittsburg & Shawmut	Feb.	97	77,616	.....	78,219	7,780	19,112	2,007	21,446	54,842	70.1	23,377	20,504	20,889	4,826
	2 mos.	97	167,053	.....	168,279	17,124	38,170	3,991	46,601	114,698	68.2	53,581	47,676	46,581	17,564
Pittsburgh & West Virginia	Feb.	136	374,387	70	393,333	39,288	94,298	19,630	91,522	266,984	67.9	126,349	92,081	115,273	95,671
	2 mos.	136	820,469	70	858,991	87,075	188,960	38,541	192,401	559,378	65.1	299,613	213,236	256,827	216,329
Pittsburg, Shawmut & Northern	Feb.	190	118,111	.....	121,327	16,965	29,484	1,197	45,056	98,002	82.8	23,325	16,677	10,042	30,946
	2 mos.	190	241,687	.....	245,809	37,541	57,787	2,199	94,622	203,090	82.6	42,719	28,974	15,901	82,293
Reading	Feb.	1,431	6,155,952	429,460	6,876,689	496,721	1,525,786	73,154	2,522,724	4,796,827	69.8	2,079,862	1,236,861	1,071,105	1,247,628
	2 mos.	1,431	12,390,674	844,914	13,866,664	1,074,296	3,176,252	148,327	5,171,247	9,921,614	71.6	3,945,050	2,319,549	2,020,997	2,523,022
Richmond, Fredericksburg & Potomac	Feb.	118	863,602	628,479	1,645,817	93,139	194,449	10,360	493,082	862,113	52.4	783,704	415,109	308,893	169,235
	2 mos.	118	1,795,753	1,232,215	3,313,349	185,106	380,907	20,993	1,006,812	1,738,869	52.5	1,574,480	825,899	625,322	350,544
Rutland	Feb.	407	232,817	33,016	318,568	34,720	63,112	9,456	150,483	267,392	83.9	51,176	34,171	36,164	—21,928
	2 mos.	407	453,996	68,490	630,542	70,395	129,322	19,226	312,341	552,742	87.7	77,800	40,226	45,371	—48,474
St. Louis-San Francisco	Feb.	4,766	4,069,351	603,506	5,060,640	572,080	1,008,251	128,912	1,914,444	3,843,021	75.9	1,217,619	1,005,865	1,096,871	692,397
	2 mos.	4,766	8,441,755	1,226,165	10,480,879	1,203,375	2,087,042	258,613	3,991,107	7,993,036	76.3	2,487,843	1,914,369	2,091,337	1,525,375
St. Louis, San Francisco & Texas	Feb.	159	172,261	1,530	178,777	23,775	18,563	8,607	64,444	121,075	67.7	57,702	48,920	22,684	—10,737
	2 mos.	159	336,447	1,974	348,653	48,691	39,893	16,664	128,567	245,746	70.5	102,907	84,810	33,284	—22,224

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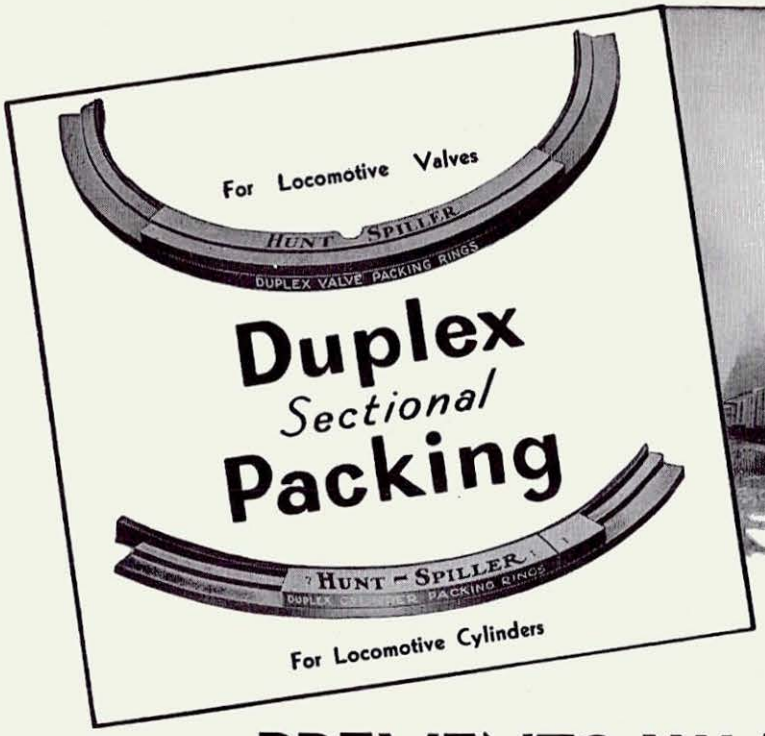

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HUNT-SPILLER *Air Furnace* GUN IRON

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1942—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1942	Net railway operating income 1941
St. Louis Southwestern Lines	Feb.	1,617	$2,594,487	$79,585	$2,758,526	$258,350	$323,286	$90,824	$825,524	$1,588,439	57.6	$1,170,087	$633,605	$456,831	$461,462
	2 mos.	1,617	5,028,980	233,807	5,440,088	596,521	673,610	190,724	1,638,507	3,287,814	60.4	2,152,274	1,351,751	1,020,256	914,973
Seaboard Air Line	Feb.	4,305	4,691,712	1,658,619	6,787,574	893,853	1,112,563	211,730	2,311,781	4,843,019	71.4	1,944,555	1,569,555	1,306,929	874,595
	2 mos.	4,306	9,499,512	3,110,048	13,480,874	1,776,990	2,345,617	424,822	4,770,319	9,953,430	73.8	3,527,444	2,777,444	2,242,742	1,541,018
Southern Railway	Feb.	6,519	10,001,142	1,759,907	12,498,028	1,674,957	2,279,362	192,864	3,976,687	8,537,196	68.3	3,960,832	2,098,228	1,868,491	2,324,238
	2 mos.	6,519	20,713,357	3,318,023	25,562,228	3,058,609	4,580,671	389,070	8,276,155	17,163,656	67.1	8,398,572	4,918,622	4,514,094	4,421,180
Alabama Great Southern	Feb.	315	888,342	144,670	1,088,363	109,522	196,309	20,206	321,140	680,622	62.5	407,741	140,548	117,254	161,752
	2 mos.	315	1,772,939	296,038	2,192,153	207,934	396,895	40,042	656,262	1,369,601	62.5	822,552	365,639	332,892	276,931
Cincinnati, New Orleans & Texas Pacific	Feb.	337	1,582,300	301,000	1,975,546	253,759	443,866	31,499	486,507	1,283,884	65.0	691,662	333,003	351,336	450,259
	2 mos.	337	3,249,017	503,602	3,938,735	451,468	904,871	62,391	1,019,920	2,576,604	65.4	1,362,131	711,125	753,567	972,256
Georgia Southern & Florida	Feb.	398	205,773	101,744	333,963	59,521	45,006	2,287	113,751	229,512	68.7	104,451	82,601	52,233	55,745
	2 mos.	398	426,258	174,575	653,066	112,686	99,247	4,335	231,322	468,652	71.8	184,414	134,393	88,258	136,558
New Orleans & Northeastern	Feb.	204	503,293	94,225	629,721	63,156	50,384	9,884	169,172	313,593	49.8	316,128	127,174	77,847	87,830
	2 mos.	204	950,404	187,461	1,201,786	106,847	104,469	20,209	320,683	595,551	49.6	606,235	316,523	228,601	163,323
Southern Pacific	Feb.	8,573	18,673,877	2,824,130	23,159,047	2,157,688	3,416,814	381,166	7,793,393	14,884,973	64.3	8,274,074	5,381,141	4,280,054	2,457,938
	2 mos.	8,574	38,003,358	5,613,599	46,979,417	4,417,418	7,143,056	748,587	16,217,511	30,867,262	65.7	16,112,155	11,238,989	9,114,404	5,145,481
Southern Pacific Steamship Lines	Feb.	....	3,040	73	3,185	30,396	143	.....	17,212	49,446	In excess of 99.9	—46,261	—46,540	—46,540	54,788
	2 mos.	....	6,228	102	6,227	50,143	827	1	32,310	91,446	99.9	—85,219	—85,749	—85,749	126,161
Texas & New Orleans	Feb.	4,417	5,246,731	513,065	6,101,024	799,293	824,410	135,323	1,704,163	3,704,251	60.7	2,396,773	1,336,051	1,002,676	862,909
	2 mos.	4,417	10,272,483	1,128,810	12,092,123	1,654,763	1,696,339	272,694	3,540,396	7,653,893	63.3	4,438,230	2,866,297	2,188,582	1,517,129
Spokane, Portland & Seattle	Feb.	939	1,146,049	41,617	1,243,042	150,311	107,586	10,549	393,104	697,894	56.1	545,148	454,306	348,800	123,395
	2 mos.	939	2,222,769	76,219	2,415,145	285,889	217,314	22,037	832,617	1,436,189	59.5	978,956	787,518	571,552	232,093
Tennessee Central	Feb.	286	238,034	6,606	258,563	60,515	40,938	7,163	94,619	215,293	83.3	43,270	22,466	11,327	28,934
	2 mos.	286	489,929	14,533	533,967	113,756	86,256	14,912	197,551	436,862	81.8	97,105	58,247	37,031	70,953
Texas & Pacific	Feb.	1,889	2,403,280	478,105	3,130,731	380,871	567,835	81,176	965,147	2,137,180	68.3	993,557	674,056	581,021	465,022
	2 mos.	1,889	4,688,728	1,041,871	6,242,139	759,142	1,124,410	165,762	1,960,702	4,307,150	69.0	1,934,989	1,332,044	1,113,936	967,173
Texas Mexican	Feb.	162	96,959	338	113,690	18,471	11,892	3,581	37,289	79,598	70.0	34,092	27,065	21,443	9,697
	2 mos.	162	203,622	810	240,024	39,937	25,406	7,347	77,684	166,403	69.3	73,621	59,346	47,421	21,365
Toledo, Peoria & Western	Feb.	239	145,102	1	147,516	24,468	16,672	15,364	57,029	127,690	86.6	19,826	6,312	—3,104	39,844
	2 mos.	239	237,217	1	242,126	44,655	33,753	31,921	145,399	284,900	117.7	—42,774	—70,681	—90,221	69,248
Union Pacific System	Feb.	9,871	16,105,099	1,967,830	19,347,559	2,022,199	4,106,335	375,568	6,393,511	13,787,548	71.3	5,560,011	2,940,654	2,355,629	434,478
	2 mos.	9,871	32,205,721	4,081,175	39,104,063	3,629,164	8,097,766	803,625	13,759,957	28,151,186	72.0	10,952,877	6,119,877	4,772,085	1,702,240
Utah	Feb.	111	90,294	.....	90,362	15,118	30,873	493	26,133	76,939	85.1	13,423	1,132	—2,817	3,277
	2 mos.	111	216,462	.....	216,571	35,193	64,161	920	59,416	168,360	77.7	48,211	19,260	13,613	15,745
Virginian	Feb.	653	2,003,899	2,856	2,076,400	181,791	449,899	26,144	386,873	1,089,979	52.5	986,421	541,421	545,914	954,748
	2 mos.	653	4,436,690	5,947	4,592,350	366,954	935,010	52,649	834,241	2,280,839	49.7	2,311,511	1,244,011	1,269,036	1,979,655
Wabash	Feb.	2,394	4,347,773	313,358	4,965,722	513,688	704,980	155,591	1,840,578	3,323,690	66.9	1,642,032	957,463	619,604	661,868
	2 mos.	2,402	8,615,405	643,714	9,885,385	1,015,154	1,409,229	318,675	3,746,428	6,797,674	68.8	3,087,711	1,865,110	1,200,324	1,266,404
Ann Arbor	Feb.	294	391,014	1,970	400,381	34,969	78,681	14,754	174,968	310,427	77.5	89,954	58,750	39,407	55,415
	2 mos.	294	787,569	4,622	806,453	68,560	158,006	30,209	361,363	638,708	79.2	167,745	109,742	77,293	102,246
Western Maryland	Feb.	859	1,868,737	8,224	1,927,682	185,233	451,848	44,889	541,062	1,283,857	66.6	643,825	393,825	412,500	485,743
	2 mos.	859	3,872,678	18,591	4,017,069	397,420	907,404	90,266	1,105,616	2,629,678	65.5	1,387,391	887,391	929,760	1,032,839
Western Pacific	Feb.	1,195	2,046,283	99,757	2,204,664	287,472	342,267	71,608	860,534	1,633,656	74.1	571,008	454,308	338,242	76,125
	2 mos.	1,195	4,150,855	174,960	4,435,084	564,257	700,832	149,107	1,789,771	3,351,692	75.6	1,083,392	814,766	544,233	218,096
Wheeling & Lake Erie	Feb.	507	1,424,866	1	1,481,572	153,751	334,052	39,091	474,674	1,036,210	69.9	445,362	52,500	211,954	346,356
	2 mos.	507	3,008,002	1	3,124,599	333,228	669,472	79,798	995,428	2,148,182	68.8	976,417	123,830	447,336	708,305

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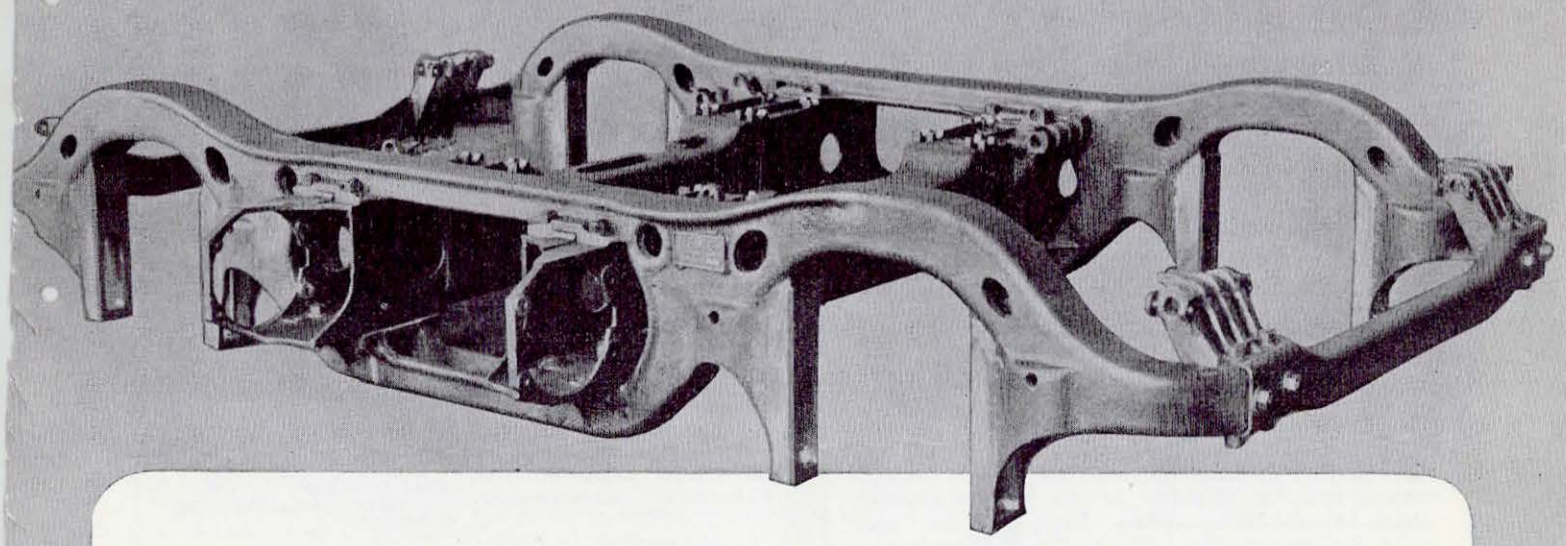

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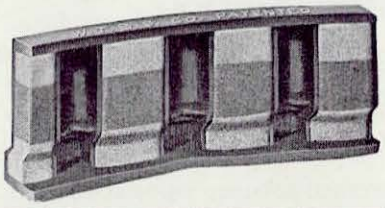

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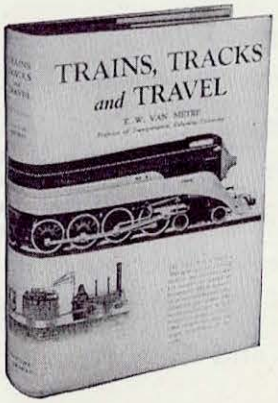
By T. W. VAN METRE

Professor of Transportation, Columbia University



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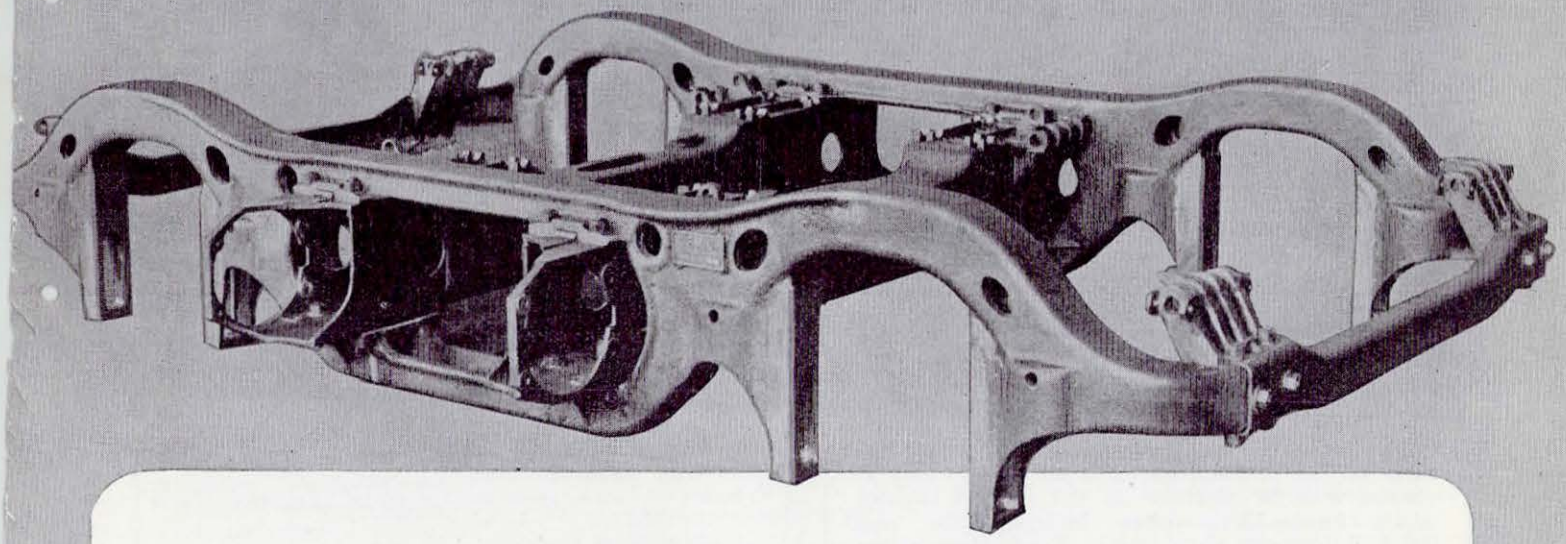

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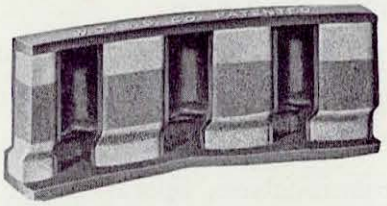

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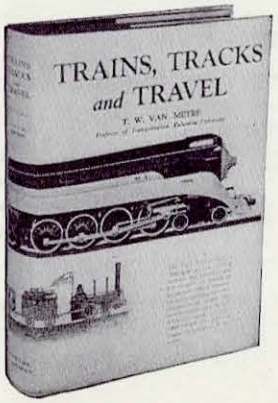

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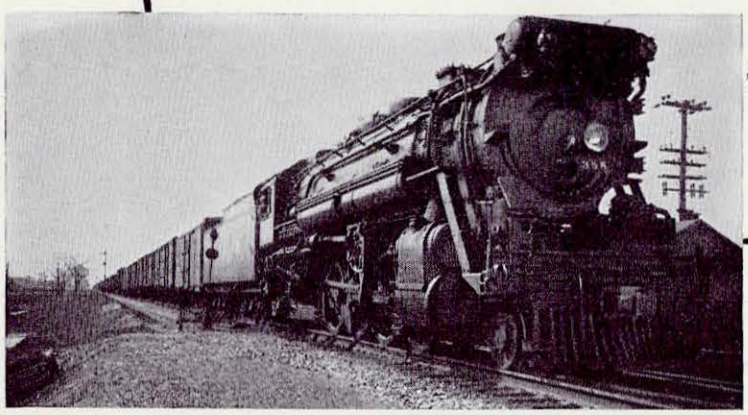

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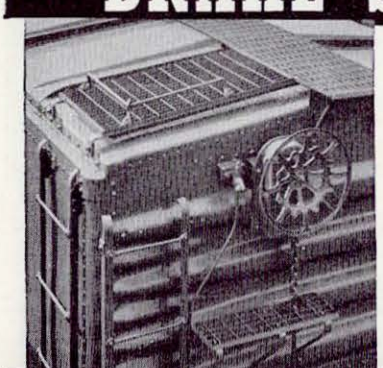

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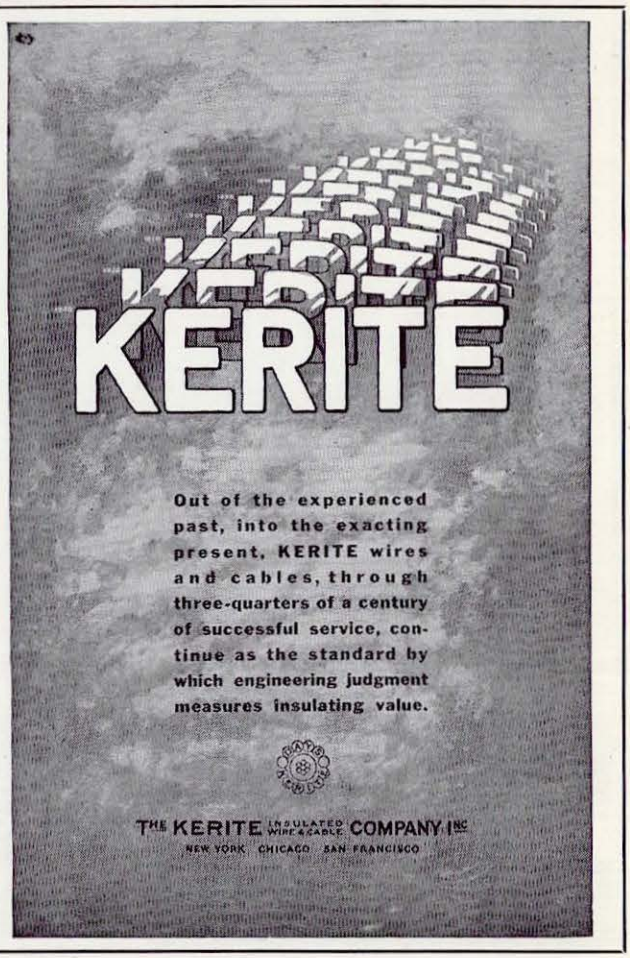
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Index to Advertisers

April 4, 1942

A

Aluminum Company of America 9
American Arch Company, Inc. 21
American Locomotive Company 23
American Steel Foundries 3

B

Baldwin Locomotive Works, The 7
Blaw-Knox Division of Blaw-Knox Company 27
Byers Company, A. M. .....Front Cover

C

Canadian Cardwell Co., Ltd. 6
Cardwell Westinghouse Co. 6
Caterpillar Tractor Co. 11
Classified Advertisements 26

D

Daniels, Inc., C. R. 26

E

Edgewater Steel Company 4, 5
Electro-Motive Division, General Motors Corporation 18
Ex-Cell-O Corporation 27

F

Fairbanks, Morse & Co. 8
Franklin Railway Supply Co., Inc. 20

G

Get Together Department 26

H

Harbison-Walker Refractories Co. 21
Hunt-Spiller Mfg. Corporation 24
Hyman-Michaels Company 26

I

Iron & Steel Products, Inc. 26

K

Kerite Insulated Wire & Cable Co., Inc., The 27

L

Lima Locomotive Works, Inc. 19

N

National Malleable and Steel Castings Co. 12

O

Ohio Locomotive Crane Co., The 26

R

Railway Educational Bureau, The 26
Ryerson & Son, Inc., Joseph T. 28

S

Safety Car Heating and Lighting Co., Inc., The 10
Schaefer Equipment Company 29
Simmons-Boardman Publishing Corp. 26
Sonken-Galamba Corp. 26
Steel Founders' Society 25
Superheater Co., The 22

T

Timber Engineering Company, Inc. 13
Timken Roller Bearing Co. .....Back Cover

U

Union Switch & Signal Co. 16
Unit Truck Corporation 2

V

Vapor Car Heating Co., Inc. 26

W

Westinghouse Air Brake Co. 14
Wheel Truing Brake Shoe Company 26

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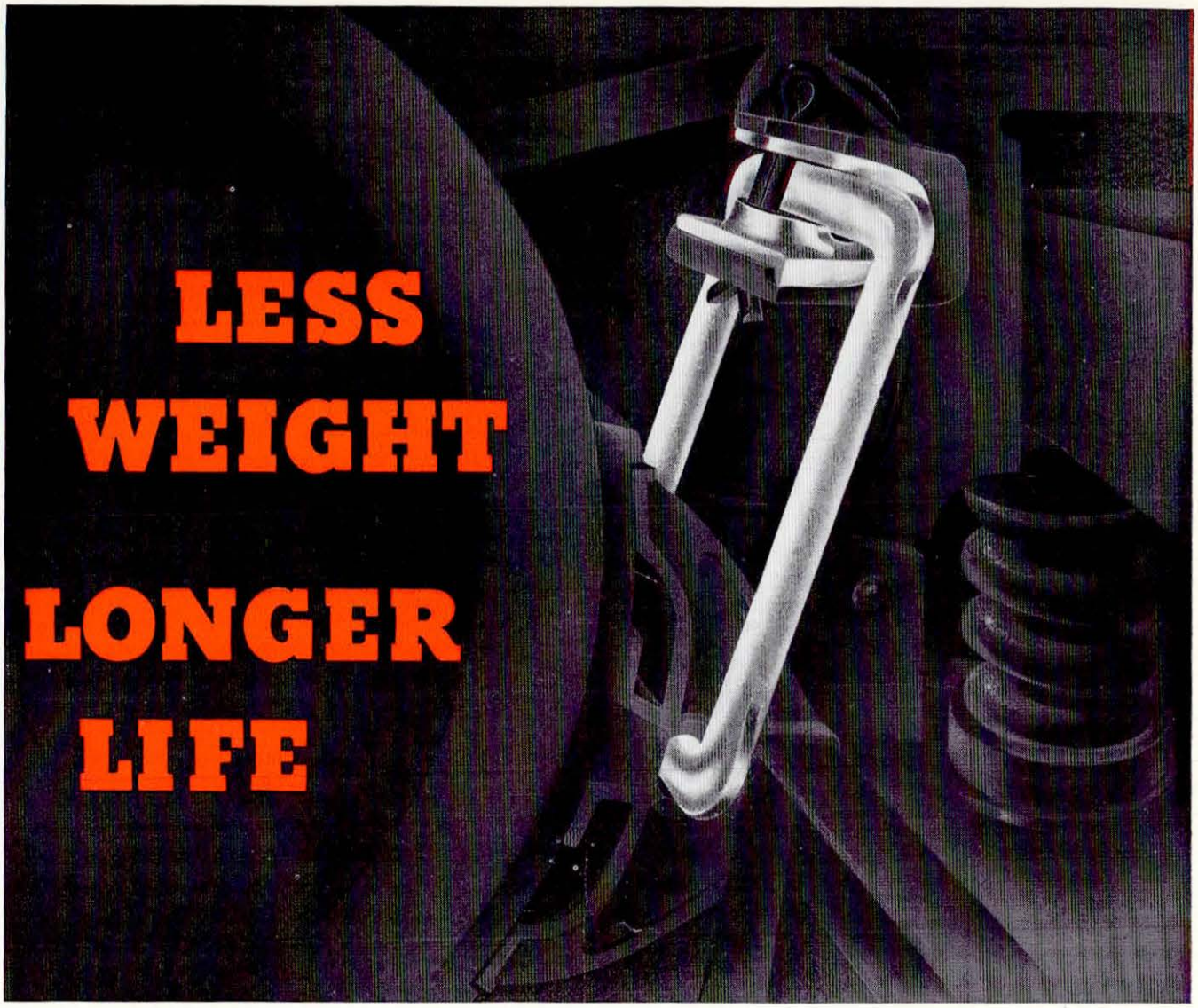

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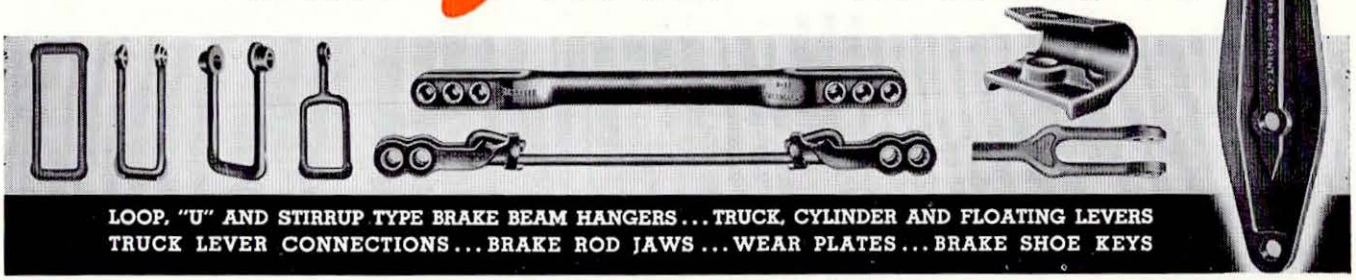

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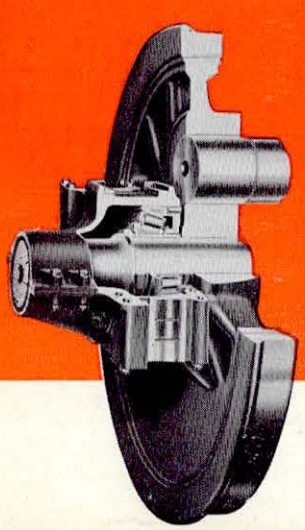

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